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ABUNDANCE, AGE, SEX, AND SIZE OF SALMON (Oncorhynchus) CATCHES AND ESCAPEMENTS IN THE KUSKOKWIM AREA, 1985

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August 1987

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Technical Data Report No. 212
Alaska Department of Fish and Game
Division of Commercial Fisheries
Juneau, Alaska

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ABSTRACT

Commercial and subsistence gill net fisheries in the Kuskokwim area of western Alaska harvested 119,095 chinook (*Oncorhynchus tshawytscha)*, 154,798 sockeye (*O. nerka*), 406,040 coho (*O. kisutch*), 1,173 pink (*O. gorbuscha*), and 317,764 chum salmon (*O. keta*) in 1985. Most (64%) of the chinook salmon harvest was male and split among ages 1.4 (40%), 1.3 (30%), and 1.2 (26%). The major age classes for the other species were 67% age-1.3 for sockeye; 86% age-2.1 for coho; and 63% age-0.3 for chum salmon. Chinook, sockeye, coho, and chum salmon escapements to the Kuskokwim, Kanektok, and Goodnews Rivers were sampled for age, sex, and size. Escapement age compositions for all species were similar in most instances to those of respective commercial catches.

KEY WORDS: Pacific salmon (*Oncorhynchus*), catch allocation, chinook salmon, chum salmon, sockeye salmon, coho salmon, age classification, fishery synopsis.

INTRODUCTION

This presentation of Kuskokwim area salmon statistics is the fourth in a series of annual reports which summarize available information regarding composition and abundance of inshore returns. The primary objective of this publication is to present the basic biological information collected by the Alaska Department of Fish and Game (ADF&G) in 1985 during on-going research and management investigations on salmon in the Kuskokwim, Quinhagak, and Goodnews Bay Districts. Included are commercial and subsistence catch data, available escapement estimates, and age and size composition by sex. Detailed knowledge of these population attributes is required in order to accurately evaluate and manage for stock-specific production. Unfortunately, while Kuskokwim area catch information is largely known, the considerable number of spawning streams scattered throughout the immense Kuskokwim Bay and River drainages has historically precluded complete escapement data collection. In 1985 total drainage-wide abundances and escapements of Kuskokwim River chinook, coho, and chum salmon were estimated although no attempts were made to allocate catches to streams of origin.

The Kuskokwim area includes five fishing districts located in or adjacent to three river systems (Figure 1). Two currently fished commercial districts are located in the mainstem Kuskokwim River (335-10 and 20), and two districts are located near the mouths of the Kanektok (335-40) and Goodnews Rivers (335-50). All three rivers support major runs of chinook (*Oncorhynchus tshawytscha*), coho (*O. kisutch*) and chum salmon (*O. keta).* In addition, the Kanektok and Goodnews Rivers support significant runs of sockeye (*O. nerka*) and even-year runs of pink salmon (*O. gorbuscha*). The Kuskokwim River also supports periodically significant runs of sockeye salmon, though most historical catches of this species have been incidental.

Nearly all commercial fishing occurs in the Lower Kuskokwim River District (335-10), the Quinhagak District (335-40) and the Goodnews Bay District (335-50). The ADF&G conducts a number of activities to collect biological information on salmon populations returning to these areas. Of major importance are programs designed to collect information concerning: 1) the magnitude and timing of the commercial and subsistence harvests in each fishing district; 2) the age, size, and sex composition of each commercial catch component; 3) the timing and either the absolute or relative magnitude of selected major spawning populations; and 4) the age, size, and sex composition of some of the enumerated spawning populations. By documenting annual run characteristics, the ADF&G hopes to improve upon and standardize the salmon data base and thereby facilitate management of discrete stocks within the production areas. Few studies to date have critically evaluated Kuskokwim area production because historic escapement and stock-specific catch data are limited.

Available annual data presently include commercial catch statistics, subsistence harvest estimates, some escapement estimates, and age, sex, and size information. Commercial catch statistics are formally published by the ADF&G, Division of Commercial Fisheries (CF). Subsistence harvest estimates are presented in the ADF&G Kuskokwim Area Annual Management Report series (ADF&G, in prep.). All escapement information is maintained in a computerized stream catalog. Prior to 1982, historic age, sex, and size data were

reported informally in various A-Y-K (Arctic-Yukon-Kuskokwim) reports. Beginning in 1982, the age, sex, and length statistics of Kuskokwim River salmon have been presented in the Technical Data Report series.

This report presents all available information on the abundance and age, size, and sex composition of the Kuskokwim area salmon runs in 1985. Catch and escapement information is apportioned by age class and sex within each species. Standard error and sample size statistics are also included in this report. In those instances where site-specific information is unavailable, abundance estimates are apportioned by average age, sex, and size data from segments of the population sampled in other locations. It should be noted that numerous small populations exist about which little or no information is available.

METHODS

Study Area Description

The Kuskokwim area consists of all waters draining into the area between Cape Newenham and Naskonat Peninsula, including Nunivak Island (Figure 1). Commercial fishing occurs in two fishing districts in the mainstem Kuskokwim River and in marine waters near the mouths of both the Kanektok and Goodnews Rivers. The Lower Kuskokwim River District (District 1 or statistical area 335-10) extends approximately 125 miles (203 km) from the lower end of Eek Island upriver to Mishevik Slough. The Middle Kuskokwim River District (District 2 or statistical area 335-20) extends from Mishevik Slough, 123 miles (198 km) upriver to the mouth of the Kolmakoff River. District 4 is located near the village of Quinhagak at the mouth of the Kanektok River and extends along the ocean shoreline for roughly 7 miles (12 km) from the mouth of Oyak Creek southward to the mouth of the Arolik River. District 5 is located within the confines of Goodnews Bay at the mouth of Goodnews River.

Drift and set gill nets are the only legal commercial fishing gear allowed in the Kuskokwim area, although most commercial fishing has been conducted with drift gill nets in recent years. The maximum aggregate net length is 50 fathoms (90 m), and salmon may be taken in nets with stretch mesh sizes of not more than six inches (15 cm) and not deeper than 45 meshes. Subsistence fishing commonly occurs with the same gill nets used for commercial purposes. The gill net size most commonly used to intentionally harvest chinook salmon for subsistence use in the Kuskokwim River is 8 inch (20 cm) stretch mesh, whereas 5 1/2 inch (14 cm) stretch mesh is the standard for all other commercial and subsistence salmon fishing in the Kuskokwim area.

Abundance Data

Commercial harvest data were tabulated from fish tickets (receipts from fish sales) in Bethel, and are considered preliminary until final catch figures are formally published by ADF&G. Final harvest figures are not expected to differ from the preliminary values by more than 1%. All historic commercial harvest comparisons were based upon statistics published by ADF&G (1982) and previous Kuskokwim Catch and Escapement series reports.

Subsistence harvest data were estimated from door to door surveys conducted in 28 villages throughout the Kuskokwim area in 1985. Interviews included retrieving catch calendars supplied by ADF&G and additional pertinent verbal information. Surveyed villages were censused, and relative fishery participation and harvest data from interviewed families were linearly expanded for the estimated number of nonrespondent families. Record keeping was voluntary, however, and there was little quality control over the data collected. Consequently, reported subsistence harvests were not as precise as commercial harvest information.

Escapement data presented in this report were collected in a variety of ways. These include visual observations from a tower and a weir, hydroacoustic sensing by side-scanning sonar, peak abundance aerial survey assessment, and calibrated test fishing CPUE data. Of these only adjusted weir counts on the Holitna River (Schneiderhan, in prep.), expanded tower counts on the middle fork of the Goodnews River (Schultz, 1985), and abundance estimates derived from test fishing on the Kuskokwim River (Huttunen, 1986a) are considered to represent total escapements. Sonar appears to accurately reflect fish presence within the ensonified water column and was used to estimate fish passage on both the Kanektok and Aniak Rivers (Huttunen, 1986b; Schneiderhan, in prep). Other escapement information presented were from aerial stream surveys during presumed periods of peak abundance under fair to good survey conditions. While it is not currently feasible to survey each small spawning tributary within the Kuskokwim drainage, an attempt was made to census all of the known major salmon spawning concentrations to provide relative escapement indices for these systems.

Age, Sex, Length

All salmon species except pink salmon were sampled for age, sex, and length. Ages were determined from scales taken in the preferred area on the left side of the fish, approximately two rows above the lateral line and on a diagonal between the posterior end of the dorsal fin and anterior end of the anal fin (INPFC, 1963). All ages are reported using European notation. The two digits of the European formula are separated by a decimal and refer to the number of freshwater and marine annuli, respectively. The first digit represents the freshwater age minus one, and the total age from brood year is the sum of the two ages plus one.

Sex was determined from external morphological characteristics except for commercially caught chinook salmon, many of which were sampled by examination of the gonads. All reported lengths were taken mid-eye to fork of tail in mm.

Samples were collected from as many catch and escapement components as practical. Where possible, samples were collected throughout the duration of the salmon migration and stratified by time if sufficient samples were attained. Sampling effort was distributed throughout the period of commercial harvest of chinook, sockeye, coho, and chum salmon in Districts 1, 4, and 5, and on the escapements of all species enumerated both at Ignatti Weir and at the Aniak River sonar project. Samples from escapements to the Goodnews and Kanektok Rivers were collected from spent carcasses. Subsistence catches were not sampled.

Age and sex compositions were estimated for each fishery with a stratified systematic sampling design (Cochran 1977). Time strata were of variable length depending on the number of samples collected. An attempt was made to sample a sufficient number of fish within a strata to simultaneously estimate the true proportion of each major age class in the catch within plus or minus five percentage points 90% of the time.

Age compositions and associated variances were estimated with procedures outlined by Cochran (1977) for stratified sampling programs:

$$C_{tj} = C_t P_{tj} \qquad V[C_{tj}] = (C_t)^2 \left(\frac{P_{tj}(P_{tj} - 1)}{N_t - 1} \right)$$

$$C_{.j} = \sum_{t=1}^{T} C_{tj} \qquad V[C_{.j}] = \sum_{t=1}^{T} V[C^{tj}]$$

Where: C^t = Number of fish caught in stratum t,

P^{tj} = Fraction of sample in stratum t of age j,

N^t = Number of samples during stratum t,

C^{tj} = Estimated number of fish of age j during stratum t,

T = Total number of strata,

$C_{.j}$ = Estimated number of fish of age j for the season, T.

If there were insufficient samples to attain the above levels of precision and accuracy for multiple time strata, the samples were pooled into a single sample period for that fishery or escapement. Catch or escapement was then apportioned by age and sex. The age, sex, and size characteristics of the subsistence harvest in all districts and the commercial harvests in District 2 were estimated by directly apportioning the nearest commercial catch samples. This was possible because the gear used to harvest salmon for subsistence purposes was largely the same as that used for commercial fishing.

RESULTS AND DISCUSSION

Commercial and Subsistence Harvest

Kuskokwim area commercial harvests totaled 74,051 chinook, 121,167 sockeye, 382,066 coho, 111 pink, and 224,665 chum salmon in 1985 (Table 1). The

chinook salmon harvest was similar to the previous 5-year average and 21% below the 1983 record catch. The record harvest of sockeye salmon was 45% greater than the 1980-84 average and 15% larger than the previous record catch. Commercial catches of coho and chum salmon were well below 1980-84 averages (15% and 48%, respectively), and catches of pink salmon were typically negligible for the odd-year cycle. The largest commercial catches of sockeye, coho, and chum salmon were reported from District 1, while most of the chinook salmon catches were evenly split between Districts 1 and 4. Relatively few salmon were caught in District 2 with coho and chum salmon predominating. Commercial effort and harvest by species and fishing period are presented for each district in Appendix Tables 1 to 4.

Total subsistence harvests in all districts were estimated at 45,044 chinook, 33,631 sockeye, 23,974 coho, 1,062 pink, and 93,099 chum salmon (Table 1). The chinook salmon harvest was the lowest reported since 1978 and 29% below the 1980-84 average. Similarly, subsistence catches of sockeye, coho, pink, and chum salmon, historically pooled and classified as "small" salmon, were 12% smaller than the 1980-84 average and were the lowest reported since 1980. Nearly all of the chinook (94%), sockeye, coho, pink, and chum salmon (99% each) were taken in District 1. Most (5%) of the remaining chinook salmon were taken in District 4.

Escapement Abundance

Salmon spawn in numerous tributaries throughout the Kuskokwim, Kanektok, and Goodnews River drainages. Estimates of total spawning abundances by species in the Kuskokwim River were derived from test fishing CPUE which was calibrated from commercial harvests (Huttunen, 1986a). Estimated escapements to the Kanektok and Goodnews Rivers were developed from sonar counts which were apportioned to species by test fishing sonar counts (Huttunen, 1986b), and from tower counts which were expanded by aerial survey (Schultz, 1985), respectively. Daily escapement estimates are presented for each species by river in Appendix Tables 5-15.

Chinook Salmon:

Chinook salmon spawn in numerous tributaries to the Kuskokwim River, and in the Kanektok and Goodnews River systems. In all, 7,682 chinook salmon were observed in tributaries of the Kuskokwim River in 1985, while the total drainage-wide escapement was estimated to be 25,239 fish based on calibrated test fishing CPUE data (Table 2). Total escapements to the Kanektok and Goodnews Rivers were estimated to be 35,755 and 7,979 chinook salmon, respectively. Escapements to all systems except the Kanektok and Goodnews were well below provisional objectives established by Schneiderhan (1983).

Sockeye Salmon:

Concentrations of sockeye salmon were reported only in the Kogrukluk, Kanektok, and Goodnews Rivers (4,223, 16,270, and 50,481 fish, respectively) although weather prevented many aerial surveys in 1985. The total escapement of sockeye salmon to the Kuskokwim River was estimated at 279,217 fish in 1985.

Coho Salmon:

Aerial surveys of coho salmon during periods of peak spawning abundance were not conducted in the Kuskokwim area in 1985. However, 16,536 coho salmon passed through a weir on the Kogrukluk River, and 426,521 fish were estimated to have escaped to spawn in the Kuskokwim River drainage based on calibrated test fishing data (Table 2).

Pink Salmon:

Pink salmon are present sporadically within the Kuskokwim area during odd-numbered years. Consequently, escapements of pink salmon were not counted in 1985.

Chum Salmon:

Chum salmon spawn in numerous tributaries to the Kuskokwim, Kanektok, and Goodnews Rivers. Some 242,601 chum salmon were counted in spawning tributaries to the Kuskokwim River in 1985, and a total of 376,737 fish were estimated from calibrated test fishing data to have spawned in the Kuskokwim River drainage (Table 2). An additional 25,025 and 15,325 chum salmon were estimated to have spawned in the Goodnews and Kanektok River systems, respectively.

Age, Sex, and Length Composition

Age, sex, and length compositions of Kuskokwim area salmon catches and escapements are presented separately for each species.

Chinook Salmon:

The majority (43%) of the chinook salmon commercially harvested in the Kuskokwim area in 1985 were age-1.4 and most (64%) were female (Table 3, Appendix Tables 16-22). District 1 commercial catches were comprised equally of age-1.2, age-1.3, and age-1.4 fish (28%, 35%, and 32%, respectively). In contrast, chinook salmon caught in Districts 4 and 5 were predominantly age 1.4 (55% and 56%, respectively). Males comprised the majority of all district catches (62%, 69%, and 59% in Districts 1, 4, and 5, respectively). Age-1.2 and age-1.3 chinook salmon were predominantly (81%) male, while the sex composition of age-1.4 and age-1.5 fish was slightly (56%) skewed toward females.

Kuskokwim area subsistence salmon harvests were not sampled in 1985. Therefore, the age, sex, and length information presented was apportioned directly from the nearest commercial harvest samples (Appendix Tables 23-25). This was appropriate because virtually all of the gear used to harvest salmon for subsistence purposes was the same as that used for commercial fishing. The estimated 42,277 chinook salmon harvested during subsistence fishing in the Kuskokwim River was greater than the 37,889 fish caught commercially (Table 3). Subsistence catches in Districts 4 and 5 were relatively minor (2,767 fish).

The average size of chinook salmon caught in the commercial fishery ranged from 341 mm for age-1.1 to 993 mm for age-1.5 males (Table 4). Average sizes

of female chinook salmon ranged from 544 mm for age-1.2 to 919 mm for age-1.5 fish.

Chinook salmon sampled at the Kogrukluk River weir were mostly (45%) age-1.4 in contrast to chinook salmon sampled from the Kuskokwim River commercial harvest which were more evenly distributed (Tables 3 and 5). Chinook salmon sampled from both the Kanektok and Goodnews River escapements were mostly age-1.4 (76% and 95%, respectively) although the sample size (n=19) at Goodnews River was small. Similarly, chinook salmon sampled from District 4 and District 5 commercial harvests were mainly (55% and 56%, respectively) age-1.4.

Mean lengths of spawning male chinook salmon ranged from 399 mm for age-1.1 to 1,030 mm for age-1.5 Kanektok River fish, respectively (Table 6). Mean lengths of escaping female chinook salmon ranged from 556 mm to 950 mm for age-1.2 and age-1.5 fish, respectively, in the Kogrukluk River.

Sockeye Salmon:

Sockeye salmon catches in Districts 1, 4, and 5 were sampled sufficiently to apportion harvests by age and sex. Catches in District 2 and all subsistence harvests were not sampled. Age 1.3 sockeye salmon were dominant in all districts comprising 66% to 75% of each district commercial harvest (Table 7, Appendix Tables 27-30). Sex ratios of commercial harvests were nearly even ranging from 44% males in District 1 to 54% males in District 5.

Subsistence catches of sockeye salmon were estimated for the Kuskokwim, Kanektok, and Goodnews Rivers in 1985. Prior to 1985, Kuskokwim River sockeye salmon harvests were included with pink and occasionally small chinook salmon in reported harvests of chum salmon. Commercial harvest data were used to apportion subsistence harvests by age and sex (Appendix Tables 31-33).

The mean length of commercially caught male sockeye salmon in the Kuskokwim area ranged from 547 mm for age-2.2 fish in District 5 to 612 mm for age-2.3 fish in District 4, and those of females ranged from 522 mm for age-1.2 fish in District 5 to 598 mm for age-1.4 fish from District 1 (Table 8).

Escapements of sockeye salmon were also largely predominated by age-1.3 fish in all locations sampled with a strong representation of age-1.2 fish in the Kanektok and Goodnews Rivers (Table 9). In contrast, the Aniak River escapement was predominantly age-1.2 fish, although the sample size (n=5) was small.

Average sizes of spawning male sockeye salmon ranged from 520 mm for age-1.2 Aniak River fish to 606 mm for age-1.4 Kogrukluk River fish (Table 10). Mean lengths of female sockeye salmon varied between 499 mm for age-1.2 Goodnews River fish and 593 mm for age-1.4 Kanektok River fish, although sample sizes from the Aniak (n=5), Kanektok (n=26), and Goodnews (n=12) Rivers were small.

Coho Salmon:

Coho salmon catches were typically composed of age-2.1 fish in 1985 (Table 11), with seasonal harvest proportions ranging from 83% in District 4 to 87% in District 1 (Appendix Tables 34-37). Temporal trends in age or sex

compositions were not apparent in samples collected from the District 1 commercial harvest, and sex compositions in all districts were slightly skewed towards males (from 51% in District 4 to 56% in District 5).

Subsistence harvests of coho salmon were relatively minor in comparison to commercial catches and were not sampled. Harvest estimates were apportioned by samples from the most proximal commercial fishery (Appendix Tables 38-40).

The mean length of male coho salmon harvested commercially in the Kuskokwim area ranged from 565 mm for age-1.1 fish in District 1 to 650 mm for age-3.1 fish in District 5 (Table 12). The average size of females varied between 578 mm at age-1.1 in District 1 and 614 mm at age 2.1 in District 5. The small variance in average size among age groups reflects the complete 1-ocean-age at maturity schedule exhibited by the species.

Only coho salmon escaping to spawn in the Kogrukluk River were sampled for age, sex, and length in 1985 (Table 13). Similar to commercial harvest samples of the species, escapement samples were uniformly 1-ocean-age, and most (98%) were age-2.1 with the bulk of the remainder (2%) as age-1.1 (Appendix Table 41). The sex composition of coho salmon in the Kogrukluk River was slightly skewed toward males (54%), and the predominance of males declined from 65% early in the run to 41% in the last sampling period.

Chum Salmon:

Commercial chum salmon catches were sampled in Districts 1, 4, and 5 as were escapements to the Aniak, Kogrukluk, Kanektok, and Goodnews Rivers in 1985. Predominant age classes varied from 64% age-0.4 fish in District 1 to 53% and 58% age-0.3 fish in Districts 4 and 5, respectively (Table 14, Appendix Tables 42- 45). Sex compositions of all catches were slightly skewed toward females ranging from 53% female in District 4 to 58% female in District 5. Temporal shifts in sex composition were not apparent in District 1 harvests, and no other catch components were sampled sufficiently to detect temporal changes in 1985.

Subsistence harvests of Kuskokwim area chum salmon were not sampled, so estimated harvests were again apportioned by sex and age based upon nearby commercial harvest samples (Appendix Tables 46-48). Subsistence harvests were substantial, representing 29% of the Kuskokwim area total and 32% of the Kuskokwim River total harvest of chum salmon.

Mean lengths of male chum salmon varied between 562 mm for age- 0.2 fish and 626 mm for age-0.5 fish in District 1 (Table 15). Average lengths of females ranged from 547 mm for age-0.2 fish in District 1 to 588 mm for age-0.4 fish in District 4.

Escapement samples of chum salmon collected in 1985 mirrored those of the respective commercial fisheries. Samples from both the Kogrukluk and Aniak Rivers were predominantly age-0.4, while those from the Kanektok and Goodnews Rivers were more evenly distributed although the sample size (n=46) at Goodnews was small (Table 16, Appendix Table 49). The sex composition of chum salmon in the Kogrukluk River did not change significantly throughout the period of data collection. However, the age composition did shift from predominantly 0.4-fish to 0.3-age fish as the run progressed. A chi-square

test of significance involving the 0.3-age and 0.4-age fish resulted in a value of 10.9 which was significant at the 0.05 level (Rohlf and Sokal 1969).

Mean lengths of male chum salmon spawning in the Kuskokwim area ranged from 529 mm for age-0.2 Kogrukluk River fish to 668 mm for age-0.5 Aniak River fish (Table 17). Average sizes of escaping female chum salmon varied between 543 mm for age-0.3 Kogrukluk River fish and 589 mm for age-0.4 Goodnews River fish. Mean lengths of chum salmon sampled from escapements were not significantly different than fish of the same age sampled from nearby commercial fisheries.

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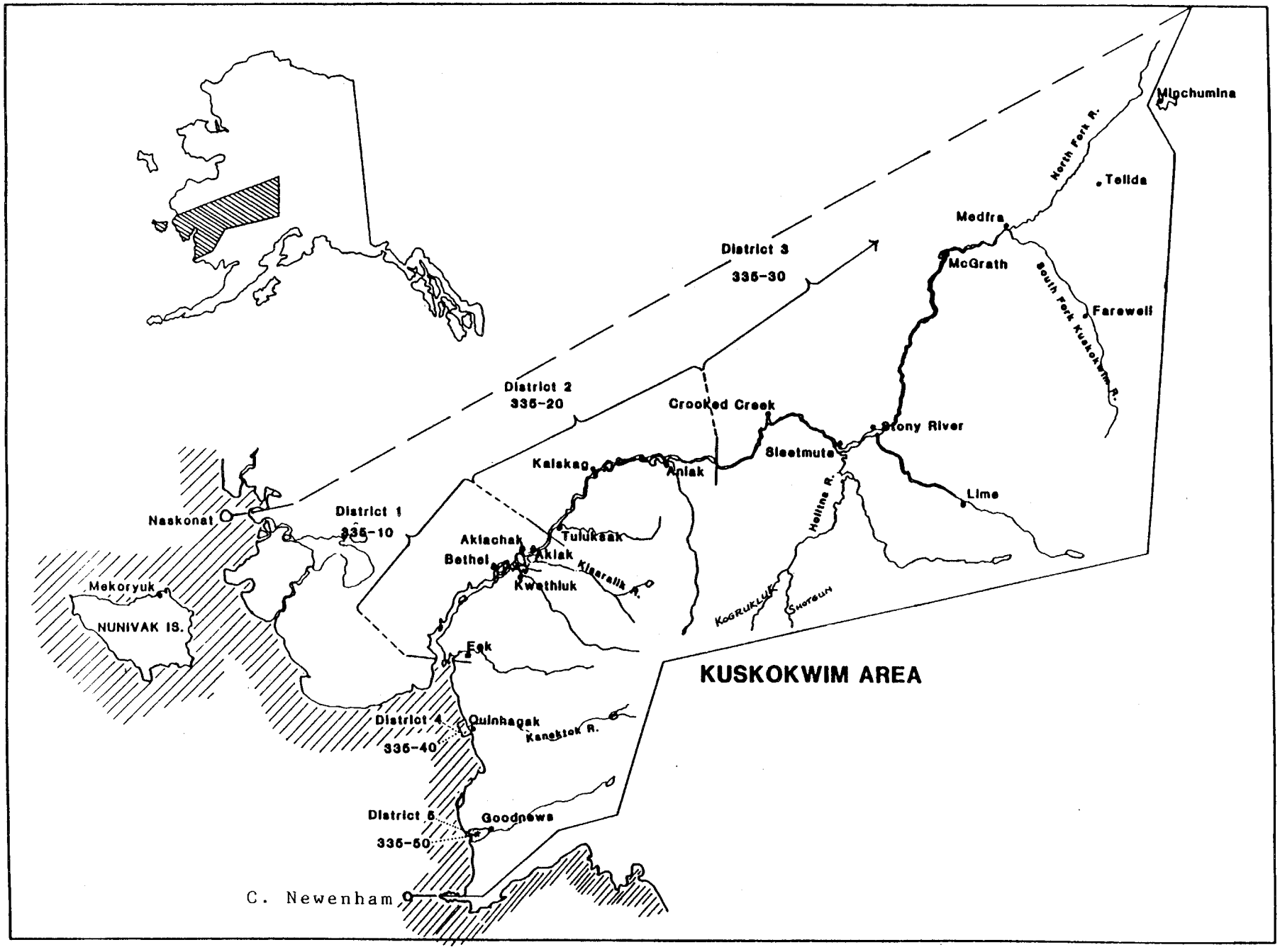

Figure 1. Map of Kuskokwim area showing commercial fishing district boundaries.

Table 1. Total harvest of Kuskokwim area salmon in numbers of fish by fishery, district, and species, 1985.

COMMERCIAL HARVEST:

District	Chinook	Sockeye	Coho	Pink	Chum	Total
1	36,159	104,353	329,948	74	191,208	661,742
2	1,730	2,294	5,658	1	8,270	17,953
4	30,401	7,876	29,992	28	20,418	88,715
5	5,761	6,644	16,468	8	4,769	33,650
Subtotal	74,051	121,167	382,066	111	224,665	802,060

SUBSISTENCE HARVEST:

Area	Chinook	Sockeye	Coho	Pink	Chum	Total
Kuskokwim River 1/	42,277	32,821	23,686	1,059	91,850	191,693
Quinhagak	2,341	106	67	1	901	3,416
Goodnews Bay	426	704	221	2	348	1,701
Subtotal	45,044	33,631	23,974	1,062	93,099	196,810
Total	119,095	154,798	406,040	1,173	317,764	998,870

1/ Small numbers of sockeye salmon harvested for subsistence purposes have historically been included in figures presented for Kuskokwim River chum salmon.

Table 2. Peak aerial survey salmon escapement estimates in Kuskokwim area spawning tributaries by species, 1985[1/].

Location	Date	Chinook	Sockeye	Coho	Pink	Chum
KUSKOKWIM RIVER:						
Aniak R. 2/	7/30/85	43				50
3/						220,985
Bear Ck. 2/	10/14/85			3		
Cheeneetnuk R.	7/26/85	1,002				30
Chineekluk Ck.			--- Not Surveyed ---			
Chukowan R.			--- Not Surveyed ---			
Eek R.	7/23/85	1,118	80			456
Mdl. Fk. Eek R.			--- Not Surveyed ---			
Holitna R. 2/ 4/	7/30/85	145	300			370
Holokuk R.	7/31/85	135				370
Kisaralik R.	7/31/85	63				48
Kogrukluk R. 5/		4,306	4,223	16,536		15,002
Kwethluk R.	8/02/85	50				1,142
Oskawalik R.	7/31/85	53				1,016
Salmon R. 6/			--- Not Surveyed ---			
N. Fk. Salmon R. 7/	7/26/85	15				
Md Fk. Salmon R. 7/	7/26/85	4				
S. Fk. Salmon R. 7/	7/26/85	606				
Tuluksak R.	7/13/84	142				3,182
	10/14/85			3		
Kuskokwim River Subtotal (aerial and weir/sonar)		7,682	4,603	16,542	0	242,651
Kuskokwim River Total 8/		25,239	279,217	426,521		376,737
KUSKOKWIM BAY:						
Goodnews River	8/01/85	3,535	1,420	100		4,415
9/		7,979	50,481			25,025
Kanektok River	7/25/85	13,465	16,270			14,385
3/		35,755	6,259	1,876		15,325
Kuskokwim Bay Subtotal (aerial survey)		17,000	17,690	100	0	18,800
Kuskokwim Bay Subtotal (sonar and tower)		43,734	56,740	1,876	0	40,350

1/ All surveys were good to fair unless otherwise noted.
2/ Poor survey conditions.
3/ Adjusted sonar count.
4/ Downstream from Ignatti Weir on the Holitna River.
5/ Weir count.
6/ Aniak River system.
7/ Pitka River system.
8/ From calibrated test fishing CPUE data.
9/ Expanded tower count.

Table 3. Total harvest of Kuskokwim area chinook salmon by age, sex, and fishery, 1985.

District	Fishery	n	Sex	AGE GROUP * 1.1	1.2	1.3	2.2	1.4	2.3	1.5	Total
1	Commercial	635	M	0	8,497	8,425	108	4,827	0	506	22,363
			F	0	1,663	4,050	0	6,709	0	1,374	13,796
			Total	0	10,161	12,475	108	11,535	0	1,880	36,159
2	Commercial	1/	M	0	406	403	5	231	0	24	1,069
			F	0	80	194	0	321	0	66	661
			Total	0	486	597	5	552	0	90	1,730
	Subsistence 1/	2/	M	0	9,922	9,848	121	5,646	0	586	26,123
			F	0	1,955	4,741	0	7,845	0	1,613	16,154
			Total	0	11,877	14,589	121	13,491	0	2,199	42,277
4	Commercial	569	M	0	5,867	6,354	0	8,118	0	486	20,825
			F	0	0	760	0	8,603	0	213	9,576
			Total	0	5,867	7,114	0	16,721	0	699	30,401
	Subsistence	3/	M	0	453	490	0	626	0	37	1,606
			F	0	0	56	0	663	0	16	735
			Total	0	453	546	0	1,289	0	53	2,341
5	Commercial	532	M	12	1,049	432	0	1,763	12	141	3,409
			F	0	576	259	0	1,451	0	66	2,352
			Total	12	1,625	691	0	3,214	12	207	5,761
	Subsistence	4/	M	0	78	32	0	131	1	10	252
			F	0	43	19	0	107	0	5	174
			Total	0	121	51	0	238	1	15	426
TOTAL HARVEST			M	12	26,272	25,984	234	21,342	13	1,790	75,647
			F	0	4,317	10,079	0	25,699	0	3,353	43,448
			Total	12	30,590	36,063	234	47,040	13	5,143	119,095

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Allocations based on District 1 commercial catch samples.
2/ Entire Kuskokwim River subsistence harvest.
3/ Allocations based on District 4 commercial catch samples.
4/ Allocations based on District 5 commercial catch samples.

Table 4. Mean length (mm) of Kuskokwim area chinook salmon commercial catch samples by age, sex, and fishery, 1985[1/].

District	Fishery	Sex		AGE GROUP * 1.1	1.2	1.3	2.2	1.4	2.3	1.5
1	Commercial 2/	M	Mean		558	677	544	809		827
			Std. Err.		4.8	5.4	38	13.9		28.9
			Samp Size		149	148	2	85		9
		F	Mean		625	737		844		890
			Std. Err.		16.9	10.3		8.6		13.2
			Samp Size		29	71		118		24
4	Commercial 2/	M	Mean		547	714		867		993
			Std. Err.		4.4	4.6		5.7		21.2
			Samp Size		110	119		152		9
		F	Mean			805		875		919
			Std. Err.			10.7		3.7		27.0
			Samp Size			14		161		4
5	Commercial 2/	M	Mean	341	552	709		887	625	970
			Std. Err.	0	4.8	13.2		5.7	0	12.3
			Samp Size	1	97	40		163	1	13
		F	Mean		544	713		879		882
			Std. Err.		8.7	17.9		4.9		19.0
			Samp Size		53	24		134		6

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Lengths are reported as mid-eye to fork-of-tail.
2/ From 15.2 cm (6.0 in) mesh gill nets only.

Table 5. Percent of Kuskokwim area chinook salmon escapement samples by age, sex, and spawning area, 1985.

River	Sample Size	Sex	AGE GROUP *							
			1.1	1.2	1.3	1.4	2.3	1.5	1.6	Total
Aniak 1/	12	M	0.0	8.3	16.7	25.0	0.0	0.0	0.0	50.0
		F	0.0	0.0	8.3	41.7	0.0	0.0	0.0	50.0
		Total	0.0	8.3	25.0	66.7	0.0	0.0	0.0	100.0
Kogrukluk 2/	1,043	M	0.0	16.6	33.3	17.6	0.0	1.1	0.0	68.6
		F	0.0	0.1	2.2	27.0	0.0	2.0	0.1	31.4
		Total	0.0	16.7	35.5	44.6	0.0	3.1	0.1	100.0
Kanektok 3/	661	M	0.6	5.3	11.0	30.6	0.3	0.6	0.0	48.4
		F	0.0	0.0	3.7	45.5	0.0	2.4	0.0	51.6
		Total	0.6	5.3	14.7	76.1	0.3	3.0	0.0	100.0
Goodnews 4/	19	M	0.0	0.0	0.0	21.0	0.0	5.3	0.0	26.3
		F	0.0	0.0	0.0	73.7	0.0	0.0	0.0	73.7
		Total	0.0	0.0	0.0	94.7	0.0	5.3	0.0	100.0

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Samples from 11.4 cm (4.5 in), 14 cm (5.5 in), and 19 cm (7.5 in) mesh gill nets.
2/ Weir samples.
3/ Combined beach seine (n=131) and carcass (n=530) samples.
4/ Carcass samples.

Table 6. Mean length (mm) of Kuskokwim area chinook salmon escapement samples by age and sex, 1985.

River		Sex		AGE GROUP *						
				1.1	1.2	1.3	1.4	2.3	1.5	1.6
Aniak	1/	M	Mean		540	665	827			
			Std. Err.		0.0	25.0	58.1			
			Samp Size		1	2	3			
		F	Mean			670	887			
			Std. Err.			0.0	24.2			
			Samp Size			1	5			
Kogrukluk	2/	M	Mean		542	684	801		956	
			Std. Err.		3.8	3.1	6.1		24.2	
			Samp Size		177	339	181		10	
		F	Mean		556	767	872		906	950
			Std. Err.		0.0	13.2	2.9		9.9	0.0
			Samp Size		1	23	290		21	1
Kanektok	3/	M	Mean	399	538	736	909	895	1,030	
			Std. Err.	33.9	15.6	10.7	4.9	25.0	7.1	
			Samp Size	4	35	73	202	2	4	
		F	Mean			818	877		923	
			Std. Err.			12.7	3.1		10.2	
			Samp Size			24	301		16	
Goodnews	4/	M	Mean				988	1,014		
			Std. Err.				23.3	0.0		
			Samp Size				4	1		
		F	Mean				922			
			Std. Err.				15.8			
			Samp Size				14			

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Samples from 11.4 cm (4.5 in), 14 cm (5.5 in), and 19 cm (7.5 in) mesh gill nets.
2/ Weir samples.
3/ Combined beach seine (n=131) and carcass (n=530) samples.
4/ Spawning ground carcass samples.

Table 7. Total harvest of Kuskokwim area sockeye salmon by age, sex, and fishery, 1985.

				AGE GROUP *							
District	Fishery	n	Sex	0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
1	Commercial	893	M	1,276	2,292	376	30,717	5,114	827	5,427	46,029
			F	1,559	3,630	722	37,720	6,380	271	8,042	58,324
			Total	2,835	5,922	1,098	68,437	11,494	1,098	13,469	104,353
2	Commercial	1/	M	28	55	7	669	108	18	115	1,000
			F	37	83	16	839	142	5	172	1,294
			Total	65	138	23	1,508	250	23	287	2,294
	Subsistence 1/	2/	M	394	787	98	9,583	1,547	263	1,641	14,313
			F	525	1,181	230	12,011	2,034	66	2,461	18,508
			Total	919	1,968	328	21,594	3,581	329	4,102	32,821
4	Commercial	312	M	0	732	0	3,170	24	0	126	4,052
			F	0	929	0	2,667	102	0	126	3,824
			Total	0	1,661	0	5,837	126	0	252	7,876
	Subsistence	3/	M	0	10	0	43	0	0	2	55
			F	0	12	0	36	1	0	2	51
			Total	0	22	0	79	1	0	4	106
5	Commercial	488	M	0	711	0	2,856	40	0	0	3,607
			F	0	897	0	2,100	40	0	0	3,037
			Total	0	1,608	0	4,956	80	0	0	6,644
	Subsistence	4/	M	0	75	0	303	4	0	0	382
			F	0	95	0	223	4	0	0	322
			Total	0	170	0	526	8	0	0	704
TOTAL HARVEST			M	1,698	4,662	481	47,341	6,837	1,108	7,311	69,438
			F	2,121	6,827	968	55,596	8,703	342	10,803	85,360
			Total	3,819	11,489	1,449	102,937	15,540	1,450	18,114	154,798

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Allocations based on District 1 commercial catch samples.
2/ Entire Kuskokwim River subsistence harvest.
3/ Allocations based on District 4 commercial catch samples.
4/ Allocations based on District 5 commercial catch samples.

Table 8. Mean length (mm) of Kuskokwim area sockeye salmon commercial catch samples by age, sex, and fishery, 1985[1/].

District	Fishery	Sex		AGE GROUP *						
				0.3	1.2	0.4	1.3	2.2	1.4	2.3
1	Commercial 2/	M	Mean	591	559	613	605	552	603	609
			Std. Err.	6.5	9.6	11.3	1.7	3.1	15.4	4.4
			Samp Size	11	21	3	261	42	7	45
		F	Mean	565	537	588	570	530	598	571
			Std. Err.	5.3	5.4	16.0	1.2	3.7	2.5	2.4
			Samp Size	14	32	6	327	55	2	67
4	Commercial 2/	M	Mean		557		600	540		612
			Std. Err.		6.7		2.1	0		15.7
			Samp Size		29		125	1		5
		F	Mean		532		571	523		561
			Std. Err.		5.7		2.3	10		10.8
			Samp Size		37		106	4		5
5	Commercial 2/	M	Mean		561		598	547		
			Std. Err.		8.8		1.9	11.4		
			Samp Size		52		210	3		
		F	Mean		522		568	542		
			Std. Err.		4.1		2.0	14.8		
			Samp Size		66		154	3		

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Lengths are reported as mid-eye to fork-of-tail.
2/ From 15.2 cm (6 in) mesh gill nets only.

Table 9. Percent of Kuskokwim area sockeye salmon escapement samples by age, sex, and spawning area, 1985.

River	Sample Size	Sex	AGE GROUP *								Total
			0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3	
Aniak 1/	5	M	0.0	0.0	60.0	0.0	20.0	0.0	0.0	0.0	80.0
		F	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	20.0
		Total	0.0	0.0	60.0	0.0	40.0	0.0	0.0	0.0	100.0
Kogrukluk 2/	603	M	0.0	3.0	0.2	0.0	47.4	0.0	0.3	0.0	50.9
		F	0.0	2.7	1.2	0.2	42.1	0.0	2.6	0.3	49.1
		Total	0.0	5.7	1.4	0.2	89.5	0.0	2.9	0.3	100.0
Kanektok 3/	26	M	0.0	0.0	19.2	3.9	23.1	0.0	0.0	0.0	46.2
		F	0.0	7.7	7.7	0.0	26.9	0.0	7.7	3.8	53.8
		Total	0.0	7.7	26.9	3.9	50.0	0.0	7.7	3.8	100.0
Goodnews 4/	17	M	0.0	0.0	17.7	0.0	41.1	5.9	0.0	0.0	64.7
		F	0.0	0.0	29.4	0.0	5.9	0.0	0.0	0.0	35.3
		Total	0.0	0.0	47.1	0.0	47.0	5.9	0.0	0.0	100.0

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Samples from 11.4 cm (4.5 in), 14 cm (5.5 in), and 19 cm (7.5 in) mesh gill nets.
2/ Weir samples.
3/ Combined beach seine (n=12) and carcass (n=14) samples.
4/ Combined beach seine (n=9) and carcass (n=10) samples.

Table 10. Mean length (mm) of Kuskokwim area sockeye salmon escapement samples by age and sex, 1985.

River		Sex		AGE GROUP							
				0.2	0.3	1.2	0.4	1.3	2.2	1.4	2.3
Aniak	1/	M	Mean			520		615			
			Std. Err.			0.0		0			
			Samp Size			3		1			
		F	Mean					540			
			Std. Err.					0.0			
			Samp Size					1			
Kogrukluk	2/	M	Mean		590	513		589		606	
			Std. Err.		7.1	0		1.2		10.0	
			Samp Size		18	1		286		2	
		F	Mean		545	524	591	546		579	579
			Std. Err.		2.8	6.4	0.0	1.2		6.3	5.0
			Samp Size		16	7	1	254		16	2
Kanektok	3/	M	Mean			600	610	598			
			Std. Err.			13.5	0.0	18.3			
			Samp Size			5	1	6			
		F	Mean		543	510		577		593	550
			Std. Err.		2.5	20.0		8.1		17.5	0.0
			Samp Size		2	2		7		2	1
Goodnews	4/	M	Mean			560		603	570		
			Std. Err.			20.5		17.3	0.0		
			Samp Size			3		7	1		
		F	Mean			499		548			
			Std. Err.			15.4		12.0			
			Samp Size			5		1			

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Samples from 11.4 cm (4.5 in), 14 cm (5.5 in), and 19 cm (17.0 in) mesh gill nets.
2/ Weir samples.
3/ Combined beach seine (n=12) and carcass (n=14) samples.
4/ Combined beach seine (n=9) and carcass (n=10) samples.

Table 11. Total harvest of Kuskokwim area coho salmon by age, sex, and fishery, 1985.

District	Fishery	n	Sex	AGE GROUP * 1.1	2.1	3.1	Total
1	Commercial	1,119	M	15,309	155,849	7,613	178,771
			F	12,905	130,547	7,725	151,177
			Total	28,214	286,396	15,338	329,948
2	Commercial	1/	M	266	2,655	135	3,056
			F	221	2,247	134	2,602
			Total	487	4,902	269	5,658
	Subsistence	2/	M	1,114	11,115	566	12,795
			F	925	9,407	559	10,891
			Total	2,039	20,522	1,125	23,686
4	Commercial	217	M	1,382	13,269	553	15,204
			F	1,797	11,471	1,520	14,788
			Total	3,179	24,740	2,073	29,992
	Subsistence	3/	M	3	30	1	34
			F	4	26	3	33
			Total	7	56	4	67
5	Commercial	202	M	1,219	7,493	494	9,206
			F	329	6,357	576	7,262
			Total	1,548	13,850	1,070	16,468
	Subsistence	4/	M	16	100	7	123
			F	5	85	8	98
			Total	21	185	15	221
TOTAL HARVEST			M	19,309	190,511	9,369	219,189
			F	16,186	160,140	10,525	186,851
			Total	35,495	350,651	19,894	406,040

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Allocations based on District 1 commercial catch samples.
2/ Entire Kuskokwim River subsistence harvest.
3/ Allocations based on District 4 commercial catch samples.
4/ Allocations based on District 5 commercial catch samples.

Table 12. Mean length (mm) of Kuskokwim area coho salmon commercial catch samples by age, sex, and fishery, 1985[1/].

District	Fishery		Sex		AGE GROUP * 1.1	2.1	3.1
1	Commercial	2/	M	Mean	565	583	605
				Std. Err.	5.8	1.9	7.5
				Samp Size	65	501	28
			F	Mean	578	580	592
				Std. Err.	4.6	1.6	6.9
				Samp Size	53	445	27
4	Commercial	2/	M	Mean	589	601	589
				Std. Err.	14.5	4.2	32.1
				Samp Size	10	96	4
			F	Mean	592	593	591
				Std. Err.	8.5	4.8	10.5
				Samp Size	13	83	11
5	Commercial	2/	M	Mean	586	613	650
				Std. Err.	9.7	4.3	14.0
				Samp Size	15	92	6
			F	Mean	585	614	612
				Std. Err.	34.5	3.7	19.2
				Samp Size	4	78	7

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Lengths are reported as mid-eye to fork-of-tail.
2/ From 15.2 cm (6 in) mesh gill nets only.

Table 13. Percent of Kuskokwim area coho salmon escapement samples by age, sex, and spawning area, 1985.

River	Sample Size	Sex	AGE GROUP * 1.1	2.1	3.1	Total
Kogrukluk 1/	599	M	1.5	52.6	0.2	54.3
		F	0.3	45.1	0.3	45.7
		Total	1.8	97.7	0.5	100.0

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Weir samples.

Table 14. Total harvest of Kuskokwim area chum salmon by age, sex, and fishery, 1985.

District	Fishery	n	Sex	AGE GROUP * 0.2	0.3	0.4	0.5	Total
1	Commercial	1,029	M	564	31,277	56,100	555	88,395
			F	766	35,229	66,536	181	102,813
			Total	1,330	66,506	122,636	736	191,208
2	Commercial	1/	M	26	1,289	2,456	22	3,793
			F	27	1,491	2,948	11	4,477
			Total	53	2,780	5,404	33	8,270
	Subsistence	1/ 2/	M	301	15,008	26,917	236	42,462
			F	351	16,929	32,002	106	49,388
			Total	652	31,937	58,919	342	91,850
4	Commercial	458	M	0	5,216	4,369	45	9,630
			F	0	5,617	5,171	0	10,788
			Total	0	10,833	9,540	45	20,418
	Subsistence	3/	M	0	230	193	2	425
			F	0	248	228	0	476
			Total	0	478	421	2	901
5	Commercial	270	M	0	1,325	689	0	2,014
			F	0	1,430	1,307	18	2,755
			Total	0	2,755	1,996	18	4,769
	Subsistence	4/	M	0	97	51	0	148
			F	0	104	95	1	200
			Total	0	201	146	1	348
TOTAL HARVEST			M	891	54,442	90,775	860	146,867
			F	1,144	61,048	108,287	317	170,897
			Total	2,035	115,490	199,062	1,177	317,764

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Allocations based on District 1 commercial catch samples.
2/ Entire Kuskokwim River subsistence harvest.
3/ Allocations based on District 4 commercial catch samples.
4/ Allocations based on District 5 commercial catch samples.

Table 15. Mean length (mm) of Kuskokwim area chum salmon commercial catch samples by age, sex, and fishery, 1985[1/].

District	Fishery	Sex		AGE GROUP * 0.2	0.3	0.4	0.5
1	Commercial 2/	M	Mean	562	589	606	626
			Std. Err.	6.4	2.1	1.7	17.9
			Samp Size	3	167	302	3
		F	Mean	547	569	578	616
			Std. Err.	22.0	1.6	1.4	0.0
			Samp Size	4	189	360	1
4	Commercial 2/	M	Mean		596	619	635
			Std. Err.		2.7	3.1	0
			Samp Size		117	98	1
		F	Mean		570	588	
			Std. Err.		2.2	2.5	
			Samp Size		126	116	
5	Commercial 2/	M	Mean		594	605	
			Std. Err.		3.4	4.2	
			Samp Size		75	39	
		F	Mean		572	580	627
			Std. Err.		2.7	3.0	0.0
			Samp Size		81	74	1

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Lengths are reported as mid-eye to fork-of-tail.
2/ From 15.2 cm (6 in) mesh gill nets only.

Table 16. Percent of Kuskokwim area chum salmon escapement samples by age, sex, and spawning area, 1985.

River	Sample Size	Sex	AGE GROUP * 0.2	0.3	0.4	0.5	Total
Aniak 1/	168	M	0.0	18.5	32.7	1.2	52.4
		F	0.0	22.6	25.0	0.0	47.6
		Total	0.0	41.1	57.7	1.2	100.0
Kogrukluk 2/	874	M	0.2	15.9	38.1	0.5	54.7
		F	0.0	14.4	30.9	0.0	45.3
		Total	0.2	30.3	69.0	0.5	100.0
Kanektok 3/	440	M	0.2	24.1	27.1	0.0	51.4
		F	0.2	25.7	22.7	0.0	48.6
		Total	0.4	49.8	49.8	0.0	100.0
Goodnews 4/	46	M	0.0	30.4	19.6	0.0	50.0
		F	0.0	28.3	21.7	0.0	50.0
		Total	0.0	58.7	41.3	0.0	100.0

* European ages designate the number of freshwater and marine annuli, respectively.
1/ Samples from 11.4 cm (4.5 in), 14 cm (5.5 in), and 19 cm (7.5 in) mesh gill nets.
2/ Weir samples.
3/ Combined beach seine (n=150) and carcass (n=290) samples.
4/ Combined beach seine (n=9) and carcass (n=37) samples.

Table 17. Mean length (mm) of Kuskokwim area chum salmon escapement samples by age and sex; 1985.

River		Sex		AGE GROUP * 0.2	0.3	0.4	0.5
Aniak	1/	M	Mean		578	602	668
			Std. Err.		4.7	3.8	32.5
			Samp Size		31	55	2
		F	Mean		551	553	
			Std. Err.		3.6	3.4	
			Samp Size		38	42	
Kogrukluk	2/	M	Mean	529	572	587	584
			Std. Err.	33.5	2.2	1.9	15.7
			Samp Size	2	139	333	4
		F	Mean		543	562	
			Std. Err.		2.4	1.6	
			Samp Size		126	270	
Kanektok	3/	M	Mean	599	595	612	
			Std. Err.	0.0	2.9	3.2	
			Samp Size	1	106	119	
		F	Mean	555	555	580	
			Std. Err.	0.0	3.7	3.6	
			Samp Size	1	113	100	
Goodnews	4/	M	Mean		617	616	
			Std. Err.		9.8	9.8	
			Samp Size		14	9	
		F	Mean		550	589	
			Std. Err.		11.7	11.9	
			Samp Size		13	10	

* European ages designate the number of freshwater and marine annuli, respectively.

1/ Samples from 11.4 cm (4.5 in), 14 cm (5.5 in), and 19 cm (17.0 in) mesh gill nets.

2/ Weir samples.

3/ Combined beach seine (n=150) and carcass (n=290) samples.

4/ Combined beach seine (n=9) and carcass (n=37) samples.

APPENDICES

Appendix Table 1. Lower Kuskokwim District (W-1) commercial catch of salmon by species and date, 1985.

Date	Hrs. Fished	No. of Fishermen 1/	CATCH				
			Chinook	Sockeye	Coho	Pink	Chum
20-Jun	6	423	6,519	5,246	0	0	19,762
24-Jun	6	488	10,413	25,536	0	2	42,778
27-Jun	6	492	8,791	26,155	0	2	47,443
01-Jul	6	517	6,168	31,082	0	2	47,471
04-Jul	6	460	3,774	16,114	0	5	28,581
01-Aug	6	487	204	174	34,052	27	2,470
05-Aug	6	527	121	33	54,819	9	1,558
08-Aug	6	525	58	3	78,149	10	472
12-Aug	6	530	44	7	77,809	3	342
15-Aug	6	441	28	0	28,013	6	193
19-Aug	6	406	13	2	19,316	1	32
22-Aug	6	390	10	0	17,534	0	56
26-Aug	6	297	8	0	10,688	3	22
29-Aug	6	262	8	1	9,568	4	28
TOTAL	84		36,159	104,353	329,948	74	191,208

1/ Number of fishermen making at least one delivery.

Appendix Table 2. Middle Kuskokwim District (W-2) commercial catch of salmon by species and date, 1985.

Date	Hrs. Fished	No. of Fishermen 1/	CATCH				
			Chinook	Sockeye	Coho	Pink	Chum
20-Jun	6	8	136	115	0	0	647
24-Jun	6	11	263	340	0	0	2,411
27-Jun	6	12	548	739	0	0	2,263
01-Jul	6	15	779	1,100	0	0	2,854
04-Jul	6	0	0	0	0	0	0
08-Aug	6	6	0	0	739	0	41
12-Aug	6	14	3	0	2,914	1	45
15-Aug	6	11	1	0	2,005	0	9
TOTAL	84		1,730	2,294	5,658	1	8,270

1/ Number of fishermen making at least one delivery.

Appendix Table 3. Quinhagak District (W-4) commercial catch of salmon by species and date, 1985.

Date	Hrs. Fished	No. of Fishermen 1/	CATCH				
			Chinook	Sockeye	Coho	Pink	Chum
20-Jun	12	161	6,617	111	0	0	968
24-Jun	12	110	6,698	638	0	0	3,228
27-Jun	12	78	3,795	461	0	0	1,874
01-Jul	12	97	3,752	975	0	0	2,131
04-Jul	12	126	4,068	1,201	0	0	3155
08-Jul	12	191	2,407	1,289	0	0	3231
11-Jul	12	146	1,545	1,901	0	0	2552
15-Jul	12	177	1,306	1,240	18	0	2796
01-Aug	12	60	93	42	910	11	247
05-Aug	12	62	55	6	2,234	5	143
08-Aug	12	0	0	0	0	0	0
12-Aug	12	75	24	1	3,894	0	15
14-Aug	12	69	6	1	3,543	0	24
16-Aug	12	83	10	3	4,643	1	23
19-Aug	12	63	3	2	2,532	2	5
21-Aug	12	67	4	0	2,819	2	11
23-Aug	12	77	5	1	2,542	0	9
26-Aug	12	48	5	2	1,419	1	0
28-Aug	12	41	3	1	1,514	2	4
30-Aug	12	51	1	0	1,054	3	1
02-Sep	12	7	1	0	535	0	1
04-Sep	12	35	2	0	1,177	0	0
06-Sep	12	31	1	1	1,158	1	0
TOTAL	84		30,401	7,876	29,992	28	20,418

1/ Number of fishermen making at least one delivery.

Appendix Table 4. Goodnews District (W-5) commercial catch of salmon by species and date, 1985.

Date	Hrs. Fished	No. of Fishermen 1/	CATCH				
			Chinook	Sockeye	Coho	Pink	Chum
20-Jun	12	32	648	102	0	0	165
24-Jun	12	44	988	596	0	0	821
27-Jun	12	41	1,627	685	0	0	691
01-Jul	12	43	1,156	1,143	0	0	710
08-Jul	12	45	464	1,177	0	0	934
11-Jul	12	38	408	1,397	0	0	562
15-Jul	12	45	354	1,229	0	2	767
01-Aug	12	31	24	173	241	3	59
05-Aug	12	21	18	94	497	0	23
08-Aug	12	12	7	4	547	0	2
12-Aug	12	27	20	17	1,255	0	7
14-Aug	12	28	8	4	1,325	0	10
16-Aug	12	28	11	5	1,637	0	5
19-Aug	12	34	5	5	1,394	1	2
21-Aug	12	34	6	1	1,510	0	1
23-Aug	12	33	6	4	1,308	0	0
26-Aug	12	39	6	0	2,033	0	4
28-Aug	12	37	3	1	1,896	0	2
30-Aug	12	40	1	4	1,798	0	1
02-Sep	12	34	1	2	653	1	3
04-Sep	12	24	0	1	374	1	0
06-Sep	12	0	0	0	0	0	0
TOTAL	84		5,761	6,644	16,468	8	4,769

1/ Number of fishermen making at least one delivery.

Appendix Table 5. Kogrukluk River daily and cumulative chinook salmon escapement counts, 1985.

Date	Daily Count	Cumulative Count	Cumulative Percent
06-Jul	20	20	0.5
07-Jul	60	80	1.9
08-Jul	106	186	4.3
09-Jul	119	305	7.1
10-Jul	416	721	16.7
11-Jul	166	887	20.6
12-Jul	245	1,132	26.3
13-Jul	305	1,437	33.4
14-Jul	269	1,706	39.6
15-Jul	146	1,852	43.0
16-Jul	328	2,180	50.6
17-Jul	175	2,355	54.7
18-Jul	299	2,654	61.6
19-Jul	259	2,913	67.6
20-Jul	177	3,090	71.8
21-Jul	151	3,241	75.3
22-Jul	72	3,313	76.9
23-Jul	104	3,417	79.4
24-Jul	170	3,587	83.3
25-Jul	116	3,703	86.0
26-Jul	130	3,833	89.0
27-Jul	66	3,899	90.5
28-Jul	78	3,977	92.4
29-Jul	55	4,032	93.6
30-Jul	28	4,060	94.3
31-Jul	33	4,093	95.1
01-Aug	35	4,128	95.9
02-Aug	35	4,163	96.7
03-Aug	24	4,187	97.2
04-Aug	7	4,194	97.4
05-Aug	14	4,208	97.7
06-Aug	14	4,222	98.0
07-Aug	2	4,224	98.1
08-Aug	18	4,242	98.5
09-Aug	8	4,250	98.7
10-Aug	19	4,269	99.1
11-Aug	13	4,282	99.4
12-Aug	12	4,294	99.7
13-Aug	5	4,299	99.8
14-Aug	6	4,305	99.9
15-Aug	1	4,306	100.0

Appendix Table 6. Kanektok River sonar daily and cumulative chinook salmon escapement counts, 1985.

Date	Daily Count	Cumulative Count	Cumulative Percent
18-Jun	8	8	0.0
19-Jun	68	76	0.2
20-Jun	5	81	0.2
21-Jun	18	99	0.3
22-Jun	181	280	0.8
23-Jun	559	839	2.3
24-Jun	1,499	2,338	6.5
25-Jun	1,483	3,821	10.7
26-Jun	1,828	5,649	15.8
27-Jun	1,885	7,534	21.1
28-Jun	3,254	10,788	30.2
29-Jun	1,383	12,171	34.0
30-Jun	1,397	13,568	37.9
01-Jul	973	14,541	40.7
02-Jul	1,775	16,316	45.6
03-Jul	2,025	18,341	51.3
04-Jul	991	19,332	54.1
05-Jul	1,458	20,790	58.1
06-Jul	1,111	21,901	61.3
07-Jul	737	22,638	63.3
08-Jul	417	23,055	64.5
09-Jul	424	23,479	65.7
10-Jul	550	24,029	67.2
11-Jul	445	24,474	68.4
12-Jul	475	24,949	69.8
13-Jul	443	25,392	71.0
14-Jul	378	25,770	72.1
15-Jul	688	26,458	74.0
16-Jul	513	26,971	75.4
17-Jul	856	27,827	77.8
18-Jul	506	28,333	79.2
19-Jul	640	28,973	81.0
20-Jul	413	29,386	82.2
21-Jul	409	29,795	83.3
22-Jul	411	30,206	84.5
23-Jul	588	30,794	86.1
24-Jul	283	31,077	86.9
25-Jul	1,247	32,324	90.4
26-Jul	230	32,554	91.0
27-Jul	788	33,342	93.3
28-Jul	860	34,202	95.7
29-Jul	543	34,745	97.2
30-Jul	798	35,543	99.4
31-Jul	212	35,755	100.0

Appendix Table 7. Goodnews River tower and daily cumulative chinook salmon escapement counts, 1985[1/].

Date	Daily Count	Cumulative Count	Cumulative Percent
27-Jun	4	4	0.1
28-Jun	0	4	0.1
29-Jun	11	15	0.5
30-Jun	10	25	0.9
01-Jul	8	33	1.2
02-Jul	38	71	2.5
03-Jul	32	103	3.6
04-Jul	60	163	5.8
05-Jul	87	250	8.8
06-Jul	132	382	13.5
07-Jul	99	481	17.0
08-Jul	66	547	19.3
09-Jul	126	673	23.8
10-Jul	132	805	28.4
11-Jul	192	997	35.2
12-Jul	186	1,183	41.8
13-Jul	45	1,228	43.4
14-Jul	45	1,273	45.0
15-Jul	45	1,318	46.6
16-Jul	108	1,426	50.4
17-Jul	141	1,567	55.4
18-Jul	189	1,756	62.0
19-Jul	183	1,939	68.5
20-Jul	162	2,101	74.2
21-Jul	96	2,197	77.6
22-Jul	30	2,227	78.7
23-Jul	96	2,323	82.1
24-Jul	97	2,420	85.5
25-Jul	101	2,521	89.0
26-Jul	115	2,636	93.1
27-Jul	20	2,656	93.8
28-Jul	40	2,696	95.2
29-Jul	60	2,756	97.4
30-Jul	57	2,813	99.4
31-Jul	18	2,831	100.0

1/ Counts from the Middle Fork of the Goodnews River only.

Appendix Table 8. Kogrukluk River weir daily and cumulative sockeye salmon escapement counts, 1985.

Date	Daily Count	Cumulative	
		Count	Percent
06-Jul	9	9	0.2
07-Jul	19	28	0.6
08-Jul	50	78	1.8
09-Jul	76	154	3.6
10-Jul	91	245	5.7
11-Jul	129	374	8.6
12-Jul	221	595	13.7
13-Jul	234	829	19.1
14-Jul	145	974	22.5
15-Jul	178	1,152	26.6
16-Jul	208	1,360	31.4
17-Jul	185	1,545	35.6
18-Jul	173	1,718	39.6
19-Jul	259	1,977	45.6
20-Jul	176	2,153	49.7
21-Jul	207	2,360	54.5
22-Jul	127	2,487	57.4
23-Jul	115	2,602	60.0
24-Jul	227	2,829	65.3
25-Jul	242	3,071	70.9
26-Jul	150	3,221	74.3
27-Jul	164	3,385	78.1
28-Jul	194	3,579	82.6
29-Jul	157	3,736	86.2
30-Jul	131	3,867	89.2
31-Jul	93	3,960	91.4
01-Aug	108	4,068	93.9
02-Aug	57	4,125	95.2
03-Aug	43	4,168	96.2
04-Aug	41	4,209	97.1
05-Aug	27	4,236	97.7
06-Aug	27	4,263	98.4
07-Aug	11	4,274	98.6
08-Aug	27	4,301	99.2
09-Aug	8	4,309	99.4
10-Aug	7	4,316	99.6
11-Aug	1	4,317	99.6
12-Aug	13	4,330	99.9
13-Aug	2	4,332	100.0
14-Aug	1	4,333	100.0
15-Aug	1	4,334	100.0

Appendix Table 9. Kanektok River sonar daily and cumulative sockeye salmon escapement counts, 1985.

Date	Daily Count	Cumulative Count	Cumulative Percent
18-Jun	0	0	0.0
19-Jun	0	0	0.0
20-Jun	0	0	0.0
21-Jun	0	0	0.0
22-Jun	0	0	0.0
23-Jun	0	0	0.0
24-Jun	0	0	0.0
25-Jun	0	0	0.0
26-Jun	116	116	1.9
27-Jun	284	400	6.4
28-Jun	197	597	9.5
29-Jun	269	866	13.8
30-Jun	292	1,158	18.5
01-Jul	217	1,375	22.0
02-Jul	138	1,513	24.2
03-Jul	137	1,650	26.4
04-Jul	73	1,723	27.5
05-Jul	116	1,839	29.4
06-Jul	56	1,895	30.3
07-Jul	179	2,074	33.1
08-Jul	246	2,320	37.1
09-Jul	148	2,468	39.4
10-Jul	197	2,665	42.6
11-Jul	276	2,941	47.0
12-Jul	101	3,042	48.6
13-Jul	72	3,114	49.8
14-Jul	94	3,208	51.3
15-Jul	268	3,476	55.5
16-Jul	275	3,751	59.9
17-Jul	540	4,291	68.6
18-Jul	440	4,731	75.6
19-Jul	325	5,056	80.8
20-Jul	142	5,198	83.0
21-Jul	71	5,269	84.2
22-Jul	38	5,307	84.8
23-Jul	246	5,553	88.7
24-Jul	67	5,620	89.8
25-Jul	407	6,027	96.3
26-Jul	0	6,027	96.3
27-Jul	55	6,082	97.2
28-Jul	93	6,175	98.7
29-Jul	84	6,259	100.0

Appendix Table 10. Goodnews River tower and daily cumulative sockeye salmon escapement counts, 1985[1/].

Date	Daily Count	Cumulative Count	Cumulative Percent
27-Jun	125	125	0.5
28-Jun	235	360	1.5
29-Jun	616	976	4.0
30-Jun	825	1,801	7.5
01-Jul	1,033	2,834	11.7
02-Jul	883	3,717	15.4
03-Jul	565	4,282	17.7
04-Jul	1,044	5,326	22.1
05-Jul	1,523	6,849	28.4
06-Jul	1,016	7,865	32.6
07-Jul	1,087	8,952	37.1
08-Jul	1,158	10,110	41.9
09-Jul	1,680	11,790	48.9
10-Jul	1,212	13,002	53.9
11-Jul	1,362	14,364	59.5
12-Jul	777	15,141	62.7
13-Jul	780	15,921	66.0
14-Jul	774	16,695	69.2
15-Jul	768	17,463	72.4
16-Jul	753	18,216	75.5
17-Jul	963	19,179	79.5
18-Jul	1,077	20,256	83.9
19-Jul	1,038	21,294	88.2
20-Jul	1,074	22,368	92.7
21-Jul	771	23,139	95.9
22-Jul	468	23,607	97.8
23-Jul	121	23,728	98.3
24-Jul	221	23,949	99.2
25-Jul	102	24,051	99.7
26-Jul	37	24,088	99.8
27-Jul	18	24,106	99.9
28-Jul	11	24,117	99.9
29-Jul	4	24,121	100.0
30-Jul	0	24,121	100.0
31-Jul	10	24,131	100.0

1/ Counts from the Middle Fork of the Goodnews River only.

Appendix Table 11. Kogrukluk River weir daily and cumulative coho salmon escapement counts, 1985[1/].

Date	Daily Count	Cumulative Count	Cumulative Percent
27-Jul	1	1	0.0
28-Jul	1	2	0.0
29-Jul	0	2	0.0
30-Jul	3	5	0.0
31-Jul	3	8	0.1
01-Aug	6	14	0.1
02-Aug	4	18	0.1
03-Aug	7	25	0.2
04-Aug	7	32	0.2
05-Aug	14	46	0.3
06-Aug	8	54	0.4
07-Aug	18	72	0.5
08-Aug	49	121	0.9
09-Aug	13	134	1.0
10-Aug	94	228	1.6
11-Aug	59	287	2.0
12-Aug	118	405	2.9
13-Aug	68	473	3.4
14-Aug	82	555	3.9
15-Aug	84	639	4.5
24-Aug	67	706	5.0
25-Aug	231	937	6.7
26-Aug	200	1,137	8.1
27-Aug	473	1,610	11.4
28-Aug	890	2,500	17.8
29-Aug	817	3,317	23.6
30-Aug	494	3,811	27.1
31-Aug	859	4,670	33.2
01-Sep	1380	6,050	43.0
02-Sep	1271	7,321	52.0
03-Sep	566	7,887	56.0
04-Sep	557	8,444	60.0
05-Sep	631	9,075	64.5
06-Sep	530	9,605	68.3
07-Sep	853	10,458	74.3
08-Sep	818	11,276	80.1
09-Sep	589	11,865	84.3
10-Sep	339	12,204	86.7
11-Sep	155	12,359	87.8
12-Sep	308	12,667	90.0
13-Sep	233	12,900	91.7
14-Sep	259	13,159	93.5
15-Sep	241	13,400	95.2
16-Sep	140	13,540	96.2
17-Sep	113	13,653	97.0

-Continued-

Appendix Table 11. Kogrukluk River weir and daily and cumulative coho salmon escapement counts, 1985[1/] (continued).

Date	Daily Count	Cumulative Count	Cumulative Percent
18-Sep	84	13,737	97.6
19-Sep	138	13,875	98.6
20-Sep	90	13,965	99.2
21-Sep	60	14,025	99.7
22-Sep	38	14,063	99.9
23-Sep	9	14,072	100.0

1/ An additional 930 coho salmon are estimated to have escaped to the Kogrukluk River during periods of non-counting in 1985.

Appendix Table 12. Aniak River sonar daily and cumulative chum salmon escapement counts, 1985[1/].

Date	Daily Count	Cumulative Count	Cumulative Percent
21-Jun	0	0	0.0
22-Jun	665	665	0.4
23-Jun	846	1,511	0.8
24-Jun	1,736	3,246	1.7
25-Jun	707	3,953	2.1
26-Jun	587	4,539	2.4
27-Jun	954	5,493	2.9
28-Jun	1,560	7,053	3.8
29-Jun	1,685	8,738	4.7
30-Jun	1,896	10,634	5.7
01-Jul	1,410	12,044	6.4
02-Jul	1,944	13,988	7.5
03-Jul	3,713	17,700	9.4
04-Jul	2,502	20,202	10.8
05-Jul	3,020	23,222	12.4
06-Jul	5,972	29,193	15.6
07-Jul	4,782	33,975	18.1
08-Jul	5,721	39,696	21.1
09-Jul	5,715	45,411	24.2
10-Jul	5,501	50,912	27.1
11-Jul	6,386	57,297	30.5
12-Jul	6,554	63,851	34.0
13-Jul	4,640	68,490	36.5
14-Jul	4,220	72,710	38.7
15-Jul	6,332	79,041	42.1
16-Jul	14,348	93,389	49.8
17-Jul	6,909	100,298	53.4
18-Jul	5,132	105,429	56.2
19-Jul	5,880	111,309	59.3
20-Jul	6,707	118,016	62.9
21-Jul	5,786	123,801	66.0
22-Jul	13,164	136,965	73.0
23-Jul	15,588	152,553	81.3
24-Jul	4,506	157,059	83.7
25-Jul	4,562	161,621	86.1
26-Jul	4,757	166,377	88.6
27-Jul	5,168	171,545	91.4
28-Jul	4,043	175,587	93.5
29-Jul	5,130	180,717	96.3
30-Jul	4,155	184,872	98.5
31-Jul	2,843	187,715 1/	100.0

1/ An additional 33,270 chum salmon are estimated to have escaped to the Aniak River drainage during periods of non-counting in 1985.

Appendix Table 13. Kogrukluk River weir daily and cumulative chum salmon escapement counts, 1985.

Date	Daily Count	Cumulative Count	Cumulative Percent
06-Jul	261	261	1.9
07-Jul	686	947	6.8
08-Jul	381	1,328	9.6
09-Jul	618	1,946	14.1
10-Jul	542	2,488	18.0
11-Jul	382	2,870	20.7
12-Jul	499	3,369	24.3
13-Jul	539	3,908	28.2
14-Jul	707	4,615	33.3
15-Jul	557	5,172	37.4
16-Jul	836	6,008	43.4
17-Jul	724	6,732	48.6
18-Jul	646	7,378	53.3
19-Jul	628	8,006	57.8
20-Jul	511	8,517	61.5
21-Jul	472	8,989	64.9
22-Jul	473	9,462	68.3
23-Jul	449	9,911	71.6
24-Jul	525	10,436	75.4
25-Jul	575	11,011	79.5
26-Jul	459	11,470	82.9
27-Jul	316	11,786	85.1
28-Jul	341	12,127	87.6
29-Jul	242	12,369	89.3
30-Jul	217	12,586	90.9
31-Jul	259	12,845	92.8
01-Aug	149	12,994	93.9
02-Aug	149	13,143	94.9
03-Aug	91	13,234	95.6
04-Aug	87	13,321	96.2
05-Aug	58	13,379	96.6
06-Aug	53	13,432	97.0
07-Aug	52	13,484	97.4
08-Aug	77	13,561	98.0
09-Aug	45	13,606	98.3
10-Aug	82	13,688	98.9
11-Aug	53	13,741	99.3
12-Aug	30	13,771	99.5
13-Aug	38	13,809	99.7
14-Aug	19	13,828	99.9
15-Aug	16	13,844 1/	100.0

1/ An additional 1,158 chum salmon are estimated to have escaped to the Kogrukluk River after 15 August 1985.

Appendix Table 14. Kanektok River sonar daily and cumulative chum salmon escapement counts, 1985.

Date	Daily Count	Cumulative Count	Cumulative Percent
18-Jun	0	0	0.0
19-Jun	0	0	0.0
20-Jun	0	0	0.0
21-Jun	26	26	0.2
22-Jun	0	26	0.2
23-Jun	0	26	0.2
24-Jun	0	26	0.2
25-Jun	0	26	0.2
26-Jun	0	26	0.2
27-Jun	0	26	0.2
28-Jun	0	26	0.2
29-Jun	94	120	0.8
30-Jun	47	167	1.1
01-Jul	0	167	1.1
02-Jul	0	167	1.1
03-Jul	0	167	1.1
04-Jul	0	167	1.1
05-Jul	0	167	1.1
06-Jul	176	343	2.2
07-Jul	151	494	3.2
08-Jul	121	615	4.0
09-Jul	216	831	5.4
10-Jul	320	1,151	7.5
11-Jul	378	1,529	10.0
12-Jul	632	2,161	14.1
13-Jul	328	2,489	16.2
14-Jul	300	2,789	18.2
15-Jul	607	3,396	22.2
16-Jul	764	4,160	27.1
17-Jul	990	5,150	33.6
18-Jul	556	5,706	37.2
19-Jul	464	6,170	40.3
20-Jul	321	6,491	42.4
21-Jul	269	6,760	44.1
22-Jul	246	7,006	45.7
23-Jul	796	7,802	50.9
24-Jul	977	8,779	57.3
25-Jul	988	9,767	63.7
26-Jul	1,018	10,785	70.4
27-Jul	810	11,595	75.7
28-Jul	1,151	12,746	83.2
29-Jul	930	13,676	89.2
30-Jul	1,030	14,706	96.0
31-Jul	619	15,325	100.0

Appendix Table 15. Goodnews Bay tower daily and cumulative chum salmon escapement counts, 1985[1/].

Date	Daily Count	Cumulative Count	Cumulative Percent
27-Jun	0	0	0.0
28-Jun	0	0	0.0
29-Jun	0	0	0.0
30-Jun	0	0	0.0
01-Jul	0	0	0.0
02-Jul	11	11	0.1
03-Jul	4	15	0.1
04-Jul	78	93	0.9
05-Jul	152	245	2.4
06-Jul	88	333	3.2
07-Jul	55	388	3.7
08-Jul	21	409	3.9
09-Jul	81	490	4.7
10-Jul	228	718	6.9
11-Jul	570	1,288	12.4
12-Jul	708	1,996	19.3
13-Jul	288	2,284	22.0
14-Jul	450	2,734	26.4
15-Jul	612	3,346	32.3
16-Jul	972	4,318	41.7
17-Jul	777	5,095	49.1
18-Jul	690	5,785	55.8
19-Jul	873	6,658	64.2
20-Jul	630	7,288	70.3
21-Jul	358	7,646	73.8
22-Jul	85	7,731	74.6
23-Jul	444	8,175	78.9
24-Jul	440	8,615	83.1
25-Jul	323	8,938	86.2
26-Jul	404	9,342	90.1
27-Jul	261	9,603	92.6
28-Jul	230	9,833	94.8
29-Jul	198	10,031	96.8
30-Jul	113	10,144	97.8
31-Jul	223	10,367	100.0

1/ Counts from the Middle Fork of the Goodnews River only.

Appendix Table 16. Kuskokwim River District 1 commercial chinook salmon catch, age, and sex, by fishing period, 1985[1/].

		Brood Year and Age Group					
		1981	1980		1979	1978	
		1.2	1.3	2.2	1.4	1.5	Total
Stratum Dates:		6/20					
Sample Dates:		6/20					
Sample Size:		367					
Male	Percent	17.2	25.7	0.3	14.2	2.2	59.6
	Number	1,136	1,670	18	924	142	3,890
Female	Percent	3.8	13.7	0.0	18.3	4.6	40.4
	Number	249	888	0	1,190	302	2,629
Total	Percent	21.3	39.2	0.3	32.4	6.8	100.0
	Number	1,385	2,558	18	2,114	444	6,519
Stratum Dates:		6/24					
Sample Dates:		6/24					
Sample Size:		91					
Male	Percent	28.5	9.9	0.0	13.2	0.0	51.6
	Number	2,975	1,030	0	1,373	0	5,378
Female	Percent	7.7	8.8	0.0	27.5	4.4	48.4
	Number	801	915	0	2,861	458	5,035
Total	Percent	36.2	18.7	0.0	40.7	4.4	100.0
	Number	3,776	1,945	0	4,234	458	10,413
Stratum Dates:		6/27					
Sample Dates:		6/27					
Sample Size:		88					
Male	Percent	33.0	28.4	0.0	11.4	1.1	73.9
	Number	2,897	2,497	0	999	100	6,493
Female	Percent	5.7	8.0	0.0	10.2	2.3	26.2
	Number	499	700	0	899	200	2,298
Total	Percent	38.6	36.4	0.0	21.6	3.4	100.0
	Number	3,396	3,197	0	1,898	300	8,791

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Appendix Table 16. Kuskokwim River District 1 commercial chinook salmon catch, age, and sex, by fishing period, 1985[1/] (continued).

		Brood Year and Age Group					
		1981	1980		1979	1978	
		1.2	1.3	2.2	1.4	1.5	Total
Stratum Dates:		7/01					
Sample Dates:		7/01					
Sample Size:		74					
Male	**Percent**	31.0	21.6	1.4	12.2	0.0	66.2
	Number	1,917	1,334	83	750	0	4,084
Female	**Percent**	2.7	6.8	0.0	22.9	1.4	33.8
	Number	167	417	0	1,417	83	2,084
Total	**Percent**	33.7	28.4	1.4	35.1	1.4	100.0
	Number	2,084	1,751	83	2,167	83	6,168
Stratum Dates:		7/04-8/29					
Sample Dates:		7/04					
Sample Size:		17					
Male	**Percent**	50.0	25.0	0.0	12.5	0.0	87.5
	Number	2,009	1,255	0	502	0	3,766
Female	**Percent**	6.3	6.3	0.0	0.0	0.0	12.6
	Number	251	251	0	0	0	502
Total	**Percent**	52.9	35.3	0.0	11.8	0.0	100.0
	Number	2,260	1,506	0	502	0	4,268

1/ Allocations based on District 1 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 17. Kuskokwim River District 1 commercial chinook salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group					
		1981	1980		1979	1978	
		1.2	1.3	2.2	1.4	1.5	Total
Stratum Dates: 6/20-8/29							
Sample Dates: 6/20-7/04							
Sample Size: 367							
Male	**Percent**	23.5	23.3	0.3	13.3	1.4	61.8
	Number	8,497	8,425	108	4,827	506	22,363
Female	**Percent**	4.6	11.2	0.0	18.6	3.8	38.2
	Number	1,663	4,050	0	6,709	1,374	13,796
Total	**Percent**	28.1	34.5	0.3	31.9	5.2	100.0
	Number	10,160	12,475	108	11,536	1,880	36,159

1/ Allocations based on District 1 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 18. Kuskokwim River District 2 commercial chinook salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group					
		1981	1980		1979	1978	
		1.2	1.3	2.2	1.4	1.5	Total
Male	Percent	23.5	23.3	0.3	13.3	1.4	61.8
	Number	406	403	5	231	24	1,069
Female	Percent	4.6	11.2	0.0	18.6	3.8	38.2
	Number	80	194	0	321	66	661
Total	Percent	28.1	34.5	0.3	31.9	5.2	100.0
	Number	486	597	5	552	90	1,730

1/ Allocations based on District 1 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 19. Quinhagak District (W-4) commercial chinook salmon catch, age, and sex by fishing period, 1985[1/].

		Brood Year and Age Group				
		1981	1980	1979	1978	
		1.2	1.3	1.4	1.5	Total
Stratum Dates: 6/20						
Sample Dates: 6/20						
Sample Size: 183						
Male	Percent	15.3	29.0	23.5	0.5	68.3
	Number	1,013	1,916	1,555	36	4,520
Female	Percent	0.0	2.2	29.0	0.5	31.7
	Number	0	145	1,916	36	2,097
Total	Percent	15.3	31.2	52.5	1.0	100.0
	Number	1,013	2,061	3,471	72	6,617
Stratum Dates: 6/24-6/27						
Sample Dates: 6/24						
Sample Size: 137						
Male	Percent	14.6	23.3	24.1	2.2	64.2
	Number	1,532	2,451	2,527	230	6,740
Female	Percent	0.0	2.2	32.1	1.5	35.8
	Number	0	230	3,370	153	3,753
Total	Percent	14.6	25.5	56.2	3.7	100.0
	Number	1,532	2,681	5,897	383	10,493
Stratum Dates: 7/01-7/04						
Sample Dates: 7/01						
Sample Size: 211						
Male	Percent	24.6	14.2	30.3	2.4	71.5
	Number	1,927	1,112	2,372	185	5,596
Female	Percent	0.0	1.9	26.1	0.5	28.5
	Number	0	148	2,038	38	2,224
Total	Percent	24.6	16.1	56.4	2.9	100.0
	Number	1,927	1,260	4,410	223	7,820

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Appendix Table 19. Quinhagak District (W-4) commercial chinook salmon catch, age, and sex by fishing period, 1985[1/] (continued).

		Brood Year and Age Group				
		1981	1980	1979	1978	
		1.2	1.3	1.4	1.5	Total
Stratum Dates: 7/08-9/06						
Sample Dates: 7/08						
Sample Size: 38						
Male	**Percent**	26.3	10.5	31.6	0.0	68.4
	Number	1,440	576	1,727	0	3,743
Female	**Percent**	0.0	7.9	23.7	0.0	31.6
	Number	0	432	1,296	0	1,728
Total	**Percent**	26.3	18.4	55.3	0.0	100.0
	Number	1,440	1,008	3,023	0	5,471

1/ Allocations based on District 4 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 20. Quinhagak District (W-4) commercial chinook salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group				
		1981	1980	1979	1978	
		1.2	1.3	1.4	1.5	Total
Male	Percent	19.3	20.9	26.7	1.6	68.5
	Number	5,867	6,354	8,118	486	20,825
Female	Percent	0.0	2.5	28.3	0.7	31.5
	Number	0	760	8,603	213	9,576
Total	Percent	19.3	23.4	55.0	2.3	100.0
	Number	5,867	7,114	16,721	699	30,401

1/ Allocations based on District 4 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 21. Goodnews District (W-5) commercial chinook salmon catch, age, and sex by fishing period, 1985[1/].

		Brood Year and Age Group						
		1982	1981	1980	1979		1978	
		1.1	1.2	1.3	1.4	2.3	1.5	Total
Stratum Dates: 6/20								
Sample Dates: 6/20								
Sample Size: 90								
Male	Percent	0.0	13.5	7.3	37.5	0.0	3.1	61.4
	Number	0	88	47	243	0	20	398
Female	Percent	0.0	16.7	5.2	14.6	0.0	2.1	38.6
	Number	0	108	34	94	0	14	250
Total	Percent	0.0	30.2	12.5	52.1	0.0	5.2	100.0
	Number	0	196	81	337	0	34	648
Stratum Dates: 6/24								
Sample Dates: 6/24								
Sample Size: 187								
Male	Percent	0.5	15.0	9.1	26.7	0.5	4.3	56.1
	Number	5	148	90	264	5	43	555
Female	Percent	0.0	19.3	7.0	17.1	0.0	0.5	43.9
	Number	0	190	69	169	0	5	433
Total	Percent	0.5	34.3	16.1	43.8	0.5	4.8	100.0
	Number	5	338	159	433	5	48	988
Stratum Dates: 6/27								
Sample Dates: 6/27								
Sample Size: 186								
Male	Percent	0.0	26.9	4.8	32.8	0.0	0.5	64.5
	Number	0	437	79	534	0	9	1,050
Female	Percent	0.0	0.0	3.2	30.1	0.0	1.6	33.3
	Number	0	0	52	490	0	26	542
Total	Percent	0.0	26.9	8.0	62.9	0.0	2.1	97.8
	Number	0	437	131	1,024	0	35	1,592

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Appendix Table 21. Goodnews District (W-5) commercial chinook salmon catch, age, and sex by fishing period, 1985[1/] (continued).

		Brood Year and Age Group						
		1982	1981	1980	1979		1978	
		1.1	1.2	1.3	1.4	2.3	1.5	Total
Stratum Dates: 7/01-9/06								
Sample Dates: 7/01-7/11								
Sample Size: 63								
Male	Percent	0.0	9.5	11.1	25.4	0.0	1.6	46.0
	Number	0	239	278	634	0	39	1,151
Female	Percent	0.0	1.6	0.0	50.8	0.0	0.0	52.4
	Number	0	39	0	1,269	0	0	1,308
Total	Percent	0.0	11.1	11.1	76.2	0.0	1.6	98.4
	Number	0	278	278	1,903	0	39	2,459

1/ Allocations based on District 5 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 22. Goodnews District (W-5) commercial chinook salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group						
		1982	1981	1980	1979		1978	
		1.1	1.2	1.3	1.4	2.3	1.5	Total
Male	Percent	0.2	18.2	7.5	30.6	0.2	2.5	59.2
	Number	12	1,049	432	1,763	12	141	3,409
Female	Percent	0.0	10.0	4.5	25.2	0.0	1.1	40.8
	Number	0	576	259	1,451	0	66	2,352
Total	Percent	0.2	28.2	12.0	55.8	0.2	3.6	100.0
	Number	12	1,625	691	3,214	12	207	5,761

1/ Allocations based on District 5 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 23. Kuskokwim River subsistence chinook salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group					
		1981	1980		1979	1978	
		1.2	1.3	2.2	1.4	1.5	Total
Male	Percent	23.5	23.3	0.3	13.3	1.4	61.8
	Number	9,922	9,848	121	5,646	586	26,123
Female	Percent	4.6	11.2	0.0	18.6	3.8	38.2
	Number	1,955	4,741	0	7,845	1,613	16,154
Total	Percent	28.1	34.5	0.3	31.9	5.2	100.0
	Number	11,877	14,589	121	13,491	2,199	42,277

1/ Allocations based on District 1 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 24. Quinhagak District (W-4) subsistence chinook salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group				
		1981	1980	1979	1978	
		1.2	1.3	1.4	1.5	Total
Male	Percent	19.3	20.9	26.7	1.6	68.5
	Number	453	490	626	37	1,606
Female	Percent	0.0	2.5	28.3	0.7	31.5
	Number	0	56	663	16	735
Total	Percent	19.3	23.4	55.0	2.3	100.0
	Number	453	546	1,289	53	2,341

1/ Allocations based on District 4 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 25. Goodnews District (W-5) subsistence chinook salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group						
		1982	1981	1980	1979		1978	
		1.1	1.2	1.3	1.4	2.3	1.5	Total
Male	Percent	0.0	18.3	7.5	30.6	0.2	2.5	59.1
	Number	0	78	32	131	1	10	252
Female	Percent	0.0	10.1	4.5	25.2	0.0	1.1	40.9
	Number	0	43	19	107	0	5	174
Total	Percent	0.0	28.4	12.0	55.8	0.2	3.6	100.0
	Number	0	121	51	238	1	15	426

1/ Allocations based on District 5 commercial 15.2 cm (6 in) maximum mesh gill net samples.

Appendix Table 26. Kogrukluk River chinook salmon escapement, age, and sex by sample period, 1985[1/].

		Brood Year and Age Group					
		1981	1980	1979	1978	1977	
		1.2	1.3	1.4	1.5	1.6	Total
Stratum Dates: 7/06-7/19							
Sample Dates: 7/07-7/19							
Sample Size: 632							
Male	Percent	14.9	37.2	19.1	1.4	0.0	72.6
	Number	433	1,083	558	41	0	2,115
Female	Percent	0.0	1.9	23.3	2.0	0.2	27.4
	Number	0	56	677	60	5	798
Total	Percent	14.9	39.1	42.4	3.4	0.2	100.0
	Number	433	1,139	1,235	101	5	2,913
Stratum Dates: 7/20-8/15							
Sample Dates: 7/20-8/12							
Sample Size: 411							
Male	Percent	20.2	25.3	14.6	0.2	0.0	60.3
	Number	282	353	203	3	0	841
Female	Percent	0.2	2.7	34.8	2.0	0.0	39.7
	Number	3	37	485	27	0	552
Total	Percent	20.4	28.0	49.4	2.2	0.0	100.0
	Number	285	390	688	30	0	1,393

1/ Allocations based on weir samples.

Appendix Table 27. Kuskokwim River District 1 commercial sockeye salmon catch, age, and sex composition by sample period, 1985[1/].

		Brood Year and Age Group							
		1981		1980			1979		
		0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Stratum Dates: 6/20-6/27									
Sample Dates: 6/20-6/27									
Sample Size: 544									
Male	Percent	1.3	3.3	0.2	28.0	3.5	0.7	4.0	41.0
	Number	733	1,884	105	15,908	1,989	419	2,302	23,340
Female	Percent	2.0	4.2	0.6	39.5	6.4	0.0	6.3	59.0
	Number	1,151	2,407	314	22,503	3,663	0	3,559	33,597
Total	Percent	3.3	7.5	0.8	67.5	9.9	0.7	10.3	100.0
	Number	1,884	4,291	419	38,411	5,652	419	5,861	56,937
Stratum Dates: 7/01-8/29									
Sample Dates: 7/01-7/04									
Sample Size: 349									
Male	Percent	1.1	0.9	0.6	31.2	6.6	0.9	6.6	47.9
	Number	543	408	271	14,809	3,125	408	3,125	22,689
Female	Percent	0.9	2.6	0.9	32.0	5.6	0.6	9.5	52.1
	Number	408	1,223	408	15,217	2,717	271	4,483	24,727
Total	Percent	2.0	3.5	1.5	63.2	12.2	1.5	16.1	100.0
	Number	951	1,631	679	30,026	5,842	679	7,608	47,416

1/ Allocations based on District 1 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 28. Kuskokwim River District 2 commercial sockeye salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group							
		1981		1980			1979		
		0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Male	Percent	1.2	2.4	0.3	29.2	4.7	0.8	5.0	43.6
	Number	28	55	7	669	108	18	115	1,000
Female	Percent	1.6	3.6	0.7	36.6	6.2	0.2	7.5	56.4
	Number	37	83	16	839	142	5	172	1,294
Total	Percent	2.8	6.0	1.0	65.7	10.9	1.0	12.5	100.0
	Number	65	138	23	1,508	250	23	287	2,294

1/ Allocations based on District 1 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 29. Quinhagak District (W-4) commercial sockeye salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group				
		1981	1980		1979	
		1.2	1.3	2.2	2.3	Total
Stratum Dates:	6/20-8/29					
Sample Dates:	6/20-7/15					
Sample Size:	314					
Male	**Percent**	9.3	40.2	0.3	1.6	51.4
	Number	732	3,170	24	126	4,052
Female	**Percent**	11.8	33.9	1.3	1.6	48.6
	Number	929	2,667	102	126	3,824
Total	**Percent**	21.1	74.1	1.6	3.2	100.0
	Number	1,661	5,837	126	252	7,876

1/ Allocations based on District 4 commercial 15.2 cm (6 in) maximum stretch gill net samples.

Appendix Table 30. Goodnews District (W-5) commercial sockeye salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group			
		1981	1980		
		1.2	1.3	2.2	Total
Stratum Dates: 6/20-8/29					
Sample Dates: 6/20-7/11					
Sample Size: 488					
Male	**Percent**	10.7	43.0	0.6	54.3
	Number	711	2,856	40	3,607
Female	**Percent**	13.5	31.6	0.6	45.7
	Number	897	2,100	40	3,037
Total	**Percent**	24.2	74.6	1.2	100.0
	Number	1,608	4,956	80	6,644

1/ Allocations based on District 5 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 31. Kuskokwim River subsistence sockeye salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group							
		1981		1980			1979		
		0.3	1.2	0.4	1.3	2.2	1.4	2.3	Total
Male	Percent	1.2	2.4	0.3	29.2	4.7	0.8	5.0	43.6
	Number	394	787	98	9,583	1,547	263	1,641	14,313
Female	Percent	1.6	3.6	0.7	36.6	6.2	0.2	7.5	56.4
	Number	525	1,181	230	12,011	2,034	66	2,461	18,508
Total	Percent	2.8	6.0	1.0	65.8	10.9	1.0	12.5	100.0
	Number	919	1,968	328	21,594	3,581	329	4,102	32,821

1/ Allocations based on District 1 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 32. Quinhagak District (W-4) subsistence sockeye salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group				
		1981	1980		1979	
		1.2	1.3	2.2	1.4	Total
Male	Percent	9.4	40.6	0.0	1.9	51.9
	Number	10	43	0	2	55
Female	Percent	11.3	34.0	0.9	1.9	48.1
	Number	12	36	1	2	51
Total	Percent	20.8	74.5	0.9	3.8	100.0
	Number	22	79	1	4	106

1/ Allocations based on District 4 commercial 15.2 cm (6 in) maximum mesh gill net samples.

Appendix Table 33. Goodnews District (W-5) subsistence sockeye salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group			
		1981	1980		
		1.2	1.3	2.2	Total
Male	Percent	10.7	43.0	0.6	54.3
	Number	75	303	4	382
Female	Percent	13.5	31.7	0.6	45.7
	Number	95	223	4	322
Total	Percent	24.1	74.7	1.1	100.0
	Number	170	526	8	704

1/ Allocations based on District 5 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 34. Kuskokwim River District 1 commercial coho salmon catch, age, and sex composition by sample period, 1985[1/].

		Brood Year and Age Group			
		1982	1981	1980	
		1.1	2.1	3.1	Total
Stratum Dates: 8/01-8/05					
Sample Dates: 8/01-8/05					
Sample Size: 255					
Male	Percent	3.9	44.4	3.5	51.8
	Number	3,485	39,383	3,136	46,004
Female	Percent	4.3	39.6	4.3	48.2
	Number	3,834	35,199	3,834	42,867
Total	Percent	8.2	84.0	7.8	100.0
	Number	7,319	74,582	6,970	88,871
Stratum Dates: 8/08-8/12					
Sample Dates: 8/08-8/12					
Sample Size: 239					
Male	Percent	3.3	51.1	1.7	56.1
	Number	5,220	79,610	2,610	87,440
Female	Percent	2.9	39.7	1.3	43.9
	Number	4,568	61,992	1,958	68,518
Total	Percent	6.2	90.8	3.0	100.0
	Number	9,788	141,602	4,568	155,958
Stratum Dates: 8/15-8/19					
Sample Dates: 8/15-8/19					
Sample Size: 249					
Male	Percent	8.4	45.4	1.6	55.4
	Number	3,991	21,479	761	26,231
Female	Percent	4.4	37.4	2.8	44.6
	Number	2,091	17,677	1,330	21,098
Total	Percent	12.8	82.8	4.4	100.0
	Number	6,082	39,156	2,091	47,329

-Continued-

Appendix Table 34. Kuskokwim River District 1 commercial coho salmon catch, age, and sex composition by sample period, 1985[1/] (continued).

		Brood Year and Age Group			
		1982	1981	1980	
		1.1	2.1	3.1	Total
Stratum Dates:	8/22-8/29				
Sample Dates:	8/22-8/29				
Sample Size:	376				
Male	**Percent**	6.9	40.7	2.9	50.5
	Number	2,613	15,377	1,106	19,096
Female	**Percent**	6.4	41.5	1.6	49.5
	Number	2,412	15,679	603	18,694
Total	**Percent**	13.3	82.2	4.5	100.0
	Number	5,025	31,056	1,709	37,790

1/ Allocations based on District 1 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 35. Kuskokwim River District 2 commercial coho salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group			
		1982	1981	1980	
		1.1	2.1	3.1	Total
Stratum Dates:	8/01-8/29				
Sample Dates:	8/01-8/29				
Sample Size:	1,119				
Male	**Percent**	4.7	46.9	2.4	54.0
	Number	266	2,655	135	3,056
Female	**Percent**	3.9	39.7	2.4	46.0
	Number	221	2,247	134	2,602
Total	**Percent**	8.6	86.6	4.8	100.0
	Number	487	4,902	269	5,658

1/ Allocations based on District 1 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 36. Quinhagak District (W-4) commercial coho salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group			
		1982	1981	1980	
		1.1	2.1	3.1	Total
Stratum Dates:	8/01-8/29				
Sample Dates:	8/01-8/19				
Sample Size:	217				
Male	**Percent**	4.6	44.2	1.8	50.7
	Number	1,382	13,269	553	15,204
Female	**Percent**	6.0	38.2	5.1	49.3
	Number	1,797	11,471	1,520	14,788
Total	**Percent**	10.6	82.5	6.9	100.0
	Number	3,179	24,740	2,073	29,992

1/ Allocations based on District 4 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 37. Goodnews District (W-5) commercial coho salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group			
		1982	1981	1980	
		1.1	2.1	3.1	Total
Stratum Dates: 8/01-8/29					
Sample Dates: 8/01-8/21					
Sample Size: 202					
Male	Percent	7.4	45.5	3.0	55.9
	Number	1,219	7,493	494	9,206
Female	Percent	2.0	38.6	3.5	44.1
	Number	329	6,357	576	7,262
Total	Percent	9.4	84.1	6.5	100.0
	Number	1,548	13,850	1,070	16,468

1/ Allocations based on District 5 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 38. Kuskokwim River subsistence coho salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group			
		1982	1981	1980	
		1.1	2.1	3.1	Total
Male	Percent	4.7	46.9	2.4	54.0
	Number	1,114	11,115	566	12,795
Female	Percent	3.9	39.7	2.4	46.0
	Number	925	9,407	559	10,891
Total	Percent	8.6	86.6	4.7	100.0
	Number	2,039	20,522	1,125	23,686

1/ Allocations based on District 1 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 39. Quinhagak District (W-4) subsistence coho salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group			
		1982	1981	1980	
		1.1	2.1	3.1	Total
Male	Percent	4.5	44.8	1.5	50.7
	Number	3	30	1	34
Female	Percent	6.0	38.8	4.5	49.3
	Number	4	26	3	33
Total	Percent	10.4	83.6	6.0	100.0
	Number	7	56	4	67

1/ Allocations based on District 4 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 40. Goodnews District (W-5) subsistence coho salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group			
		1982	1981	1980	
		1.1	2.1	3.1	Total
Male	Percent	7.2	45.2	3.2	55.7
	Number	16	100	7	123
Female	Percent	2.3	38.5	3.6	44.3
	Number	5	85	8	98
Total	Percent	9.5	83.7	6.8	100.0
	Number	21	185	15	221

1/ Allocations based on District 5 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 41. Kogrukluk River coho salmon escapement, age, and sex by sample period, 1985[1/].

		Brood Year and Age Group			
		1982	1981	1980	
		1.1	2.1	3.1	Total
Stratum Dates: 7/27-9/06					
Sample Dates: 7/27-9/06					
Sample Size: 321					
Male	Percent	0.6	64.5	0.3	65.4
	Number	60	6,194	30	6,284
Female	Percent	0.0	34.3	0.3	34.6
	Number	0	3,291	30	3,321
Total	Percent	0.6	98.8	0.6	100.0
	Number	60	9,485	60	9,605
Stratum Dates: 9/07-9/23					
Sample Dates: 9/07-9/21					
Sample Size: 278					
Male	Percent	2.5	38.8	0.0	41.3
	Number	113	1,735	0	1,848
Female	Percent	0.7	57.6	0.4	58.7
	Number	32	2,571	16	2,619
Total	Percent	3.2	96.4	0.4	100.0
	Number	145	4,306	16	4,467

1/ Allocations based on weir samples.

Appendix Table 42. Kuskokwim River District 1 commercial chum salmon catch, age, and sex composition by sample period, 1985[1/].

		Brood Year and Age Group				
		1982	1981	1980	1979	
		0.2	0.3	0.4	0.5	Total
Stratum Dates: 6/20-6/27						
Sample Dates: 6/20-6-27						
Sample Size: 606						
Male	Percent	0.2	11.7	31.8	0.3	44.0
	Number	181	12,886	35,028	363	48,458
Female	Percent	0.0	16.0	39.8	0.2	56.0
	Number	0	17,605	43,739	181	61,525
Total	Percent	0.2	27.7	71.6	0.5	100.0
	Number	181	30,491	78,767	544	109,983
Stratum Dates: 7/01-8/29						
Sample Dates: 7/01-7/04						
Sample Size: 424						
Male	Percent	0.5	22.7	25.9	0.2	49.3
	Number	383	18,391	21,072	192	40,038
Female	Percent	0.9	21.7	28.1	0.0	50.7
	Number	766	17,624	22,797	0	41,187
Total	Percent	1.4	44.4	54.0	0.2	100.0
	Number	1,149	36,015	43,869	192	81,225

1/ Allocations based on District 1 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 43. Kuskokwim River District 2 commercial chum salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group				
		1982	1981	1980	1979	
		0.2	0.3	0.4	0.5	Total
Male	Percent	0.3	16.4	29.3	0.3	46.3
	Number	26	1,289	2,456	22	3,793
Female	Percent	0.4	18.4	34.8	0.1	53.7
	Number	27	1,491	2,948	11	4,477
Total	Percent	0.7	34.8	64.1	0.4	100.0
	Number	53	2,780	5,404	33	8,270

1/ Allocations based on District 1 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 44. Quinhagak District (W-4) commercial chum salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group			
		1981	1980	1979	
		0.3	0.4	0.5	Total
Stratum Dates: 6/20-9/06					
Sample Dates: 6/20-7/15					
Sample Size: 458					
Male	Percent	25.5	21.4	0.2	47.2
	Number	5,216	4,369	45	9,630
Female	Percent	27.5	25.3	0.0	52.8
	Number	5,617	5,171	0	10,788
Total	Percent	53.1	46.7	0.2	100.0
	Number	10,833	9,540	45	20,418

1/ Allocations based on District 4 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 45. Goodnews District (W-5) commercial chum salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group			
		1981	1980	1979	
		0.3	0.4	0.5	Total
Stratum Dates:	6/20-9/06				
Sample Dates:	7/02-8/01				
Sample Size:	270				
Male	**Percent**	27.8	14.4	0.0	42.2
	Number	1,325	689	0	2,014
Female	**Percent**	30.0	27.5	0.3	57.8
	Number	1430	1,307	18	2,755
Total	**Percent**	57.8	41.9	0.3	100.0
	Number	2,755	1,996	18	4,769

1/ Allocations based on District 5 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 46. Kuskokwim River subsistence chum salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group				
		1982	1981	1980	1979	
		0.2	0.3	0.4	0.5	Total
Male	Percent	0.3	16.4	29.3	0.3	46.3
	Number	301	15,008	26,917	236	42,462
Female	Percent	0.4	18.4	34.8	0.1	53.7
	Number	351	16,929	32,002	106	49,388
Total	Percent	0.7	34.8	64.1	0.4	100.0
	Number	652	31,937	58,919	342	91,850

1/ Allocations based on District 1 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 47. Quinhagak District (W-4) subsistence chum salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group			
		1981	1980	1979	
		0.3	0.4	0.5	Total
Male	Percent	25.5	21.4	0.2	47.2
	Number	230	193	2	425
Female	Percent	27.5	25.3	0.0	52.8
	Number	248	228	0	476
Total	Percent	53.1	46.7	0.2	100.0
	Number	478	421	2	901

1/ Allocations based on District 4 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 48. Goodnews District (W-5) subsistence chum salmon catch, age, and sex composition, 1985[1/].

		Brood Year and Age Group			
		1981	1980	1979	
		0.3	0.4	0.5	Total
Male	Percent	27.8	14.4	0.0	42.2
	Number	97	51	0	148
Female	Percent	30.0	27.5	0.3	57.8
	Number	104	95	1	200
Total	Percent	57.8	41.9	0.3	100.0
	Number	201	146	1	348

1/ Allocations based on District 5 commercial 15.2 cm (6 in) maximum stretch mesh gill net samples.

Appendix Table 49. Kogrukluk River chum salmon escapement, age, and sex by sample period, 1985[1/].

		Brood Year and Age Group				
		1982	1981	1980	1979	
		0.2	0.3	0.4	0.5	Total
Stratum Dates: 7/06-7/21						
Sample Dates: 7/07-7/21						
Sample Size: 427						
Male	**Percent**	0.2	15.7	41.7	0.5	58.1
	Number	21	1,410	2,926	42	4,399
Female	**Percent**	0.0	9.4	32.5	0.0	41.9
	Number	0	843	3,747	0	4,590
Total	**Percent**	0.2	25.1	74.2	0.5	100.0
	Number	21	2,253	6,673	42	8,989
Stratum Dates: 7/22-8/15						
Sample Dates: 7/22-8/15						
Sample Size: 447						
Male	**Percent**	0.2	16.1	34.7	0.4	51.4
	Number	11	782	1,683	22	2,498
Female	**Percent**	0.0	19.2	29.3	0.0	48.5
	Number	0	934	1,423		2,357
Total	**Percent**	0.2	35.3	64.0	0.4	99.9
	Number	11	1,716	3,106	22	4,855

1/ Allocations based on weir samples.

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